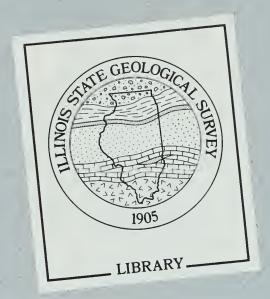
557 IL6of 1983-1 GEST SURVEY

SURVEY LIBRARY





Bibliography and Index of Illinois Geology

1983

Selected from Publications Indexed in GeoRef in 1983

Open File Series 1983-1

Illinois State Geological Survey 615 East Peabody Drive Champaign, IL 61820

GeoRef Information System

American Geological Institute 4220 King Street Alexandria, VA 22302

SURVEY LIBRARY

BIBLIOGRAPHY AND INDEX OF ILLINOIS GEOLOGY

SERIALS LIST

- AAPG Bulletin. [Tulsa, DK: American Association of Petroleum Geologists].
- AAPG Explorer. Tulsa, DK: American Association of Petroleum Geologists, 1979-.
- Abstracts International Palynological Conference. [s. l.: s. n.].
- Abstracts With Programs Geological Society of America. Boulder, CD: Geological Society of America.
- Am. Quat. Assoc., Natl. Conf., Abstr. American Quaternary Association, National Conference, Abstracts.
- American Journal of Botany, Lawrence, KS: Botanical Society of America, 1914-.
- American Midland Naturalist. Notre Dame, IN: University of Notre Dame, 1909-.
- Application of Computer Methods in the Mineral Industry. New York, NY: Society of Mining Engineers of American Institute of Mining, Metallurgical and Petroleum Engineers, Inc.
- Archives des Sciences. Geneve: Societe de Physique et d'Histoire Naturelle de Geneve, 1948-.
- Botanical Gazette (Chicago). Chicago, IL: University of Chicago Press, 1876-.
- Circular Illinois State Geological Survey.
 Urbana, IL: Illinois State Geological Survey,
 1906-.
- Circular Illinois State Water Survey. Urbana, IL: Illinois State Water Survey, 1928-.
- Clays and Clay Minerals. Clarkson, NY: The Clay Minerals Society, 1952-.
- Coastal Engineering. Amsterdam: Elsevier Scientific Publishing Company, 1977-.
- Cooperative Ground-Water Report. Illinois, State Water Survey. Urbana, IL: Illinois State Water Survey, 1959-.
- Cooperative Groundwater Report (Illinois State Geological Survey: 1981). Champaign, IL: Illinois State Geological Survey, 1981-.

- Document Illinois Institute of Natural Resources. Chicago, IL: Institute of Natural Resources.
- Earth Surfaces Processes and Landforms.
 Chichester-New York: John Wiley & Sons, 1980-.
- Earthquake Notes. Atlanta, GA: Seismological Society of America, Eastern Section by the Printing and Photographic Center of the Georgia Institute of Technology, 1929-.
- Economic Geology and the Bulletin of the Society of Economic Geologists. Lancaster, PA: Economic Geology Publishing Company.
- Environmental Geology Notes. Urbana, IL: Illinois State Geological Survey, 1965-.
- Eos, Transactions, American Geophysical Union. Washington, DC: American Geophysical Union.
- Geological Survey Occasional Paper (Bloomington). Bloomington, IN: Indiana, Department of Natural Resources, Geological Survey, 1974-.
- Geological Survey Professional Paper. Washington, DC: U. S. Department of the Interior, Geological Survey, 1902-.
- Geological Survey Water-Supply Paper (Washington). Reston, VA: U.S., Department of the Interior, Geological Survey, 1908-.
- Ground Water. Urbana, IL: National Water Well Association, Ground-Water Technology Division.
- Ground Water Monitoring Review. Worthington, OH: Water Well Journal Publishing Co., 1981-.
- Guide Leaflet Illinois State Geological Survey. Champaign, IL: Illinois, Department of Energy and Natural Resources, State Geological Survey Division.
- IIHR Report. Iowa City, IA: Iowa Institute of Hydraulic Research.
- Illinois Mineral Note. Urbana, IL: Illinois State Geological Survey Division, Illinois Institute of Natural Resources, 1972-.

1

- Illinois Petroleum. Urbana, IL: Illinois State Geological Survey, 1926-.
- International Journal of Rock Mechanics and
 Mining Sciences. Oxford-New York: Pergamon
 Press, 1964-1973.
- Jewelry Making Gems & Minerals. Mentone, CA: Gemac Corporation.
- The Journal of Coal Quality. Charleston, WV: Coal Testing Conference, 1981-.
- Journal of Paleontology. Tulsa, OK: Society of Economic Paleontologists and Mineralogists, 1927-.
- Journal of Sedimentary Petrology. Tulsa, OK: Society of Economic Paleontologists and Mineralogists, 1931-.
- Journal of Soil and Water Conservation. Ankeny, IA: Soil Conservation Society of America.
- JPT. Journal of Petroleum Technology. Dallas, TX: American Institute of Mining, Metallurgical and Petroleum Engineers.
- Kerr-McGee Resources. Oklahoma City, OK: Corporate Relations Division, Kerr-McGee Corporation.
- Memorias del Congreso Panamericano de Mecanica de Suelos e Ingenieria de Fundaciones = Proceedings of the Panamerican Conference on Soil Mechanics and Foundation Engineering. Buenos Aires: [s.n.].
- Miscellaneous Paper S (Vicksburg). Vicksburg, MS: U. S. Army Engineer Waterways Experiment Station, Soils and Pavement Laboratory.
- Nature (London). London: Macmillan Journals, 1869-.
- NSS News. Huntsville, AL: National Speleological Society News.
- Open-File Report (United States Geological Survey. 1978). Reston, VA: U. S. Geological Survey.
- Palaeontographica. Abteilung A:
 Palaozoologie-Stratigraphie. Stuttgart: E.
 Schweizerbart'sche Verlagsbuchhandlung (Nagele u. Obermiller).
- Palaeontographica, Abteilung B:
 Palaeophytologie. Stuttgart: [s.n.].
- Proceedings Symposium on Rock Mechanics. New York, NY: American Institute of Mining, Metallurgical and Petroleum Engineers.
- Proceedings Workshop on Great Lakes Coastal Erosion and Sedimentation = Comptes Rendus -Atelier sur l'Erosion et la Sedimentation Cotieres dans les Grands Lacs. Ottawa, ON: Associate Committee for Research on Shoreline Erosion and Sedimentation, National Research

- Council.
- Proceedings, AWWA Annual Conference. Denver, CO: American Water Works Association.
- The Proceedings of the Iowa Academy of Science.
 Des Moines, IA: Iowa Academy of Science,
 1887-.
- Proceedings of the National Ground-Water Quality Symposium. [s. l.: s. n.].
- Program with Abstracts Geological Association of Canada. Waterloo, ON: Geological Association of Canada, 1976-.
- Report of Investigation Illinois State Water Survey. Urbana, IL: Illinois State Water Survey.
- Reviews in Engineering Geology. Boulder, CO: Geological Society of America, 1962-.
- Rock & Gem. Encino, CA: Behn-Miller Publishers, Inc., 1971-.
- Rocks and Minerals. Washington, DC: Heldref Publications.
- Science. Washington, OC: American Association for the Advancement of Science, 1883-.
- Sedimentology. Oxford-Boston: Blackwell Scientific Publishers, 1962-.
- Soil Science Society of America Journal.

 Madison, WI: Soil Science Society of America,
 1976-.
- Special Publication Kentucky Geological
 Survey. Lexington, KY: Kentucky Geological
 Survey, 1953-.
- Spisanie na Bulgarskogo Geologichesko
 Druzhestvo. Sofia: Bulgarska Akademiya na
 Naukite, 1942-.
- Technical Report GL. Vicksburg, MS: U. S. Army Engineer Waterways Experiment Station.
- Transactions of the Illinois State Academy of Science. Springfield, IL: Illinois State Academy of Science.
- Transactions of the Missouri Academy of Science.
 Columbia, MO: Missouri Academy of Science,
 1967-.
- UMR Journal. Rolla, MI: University of Missouri-Rolla.
- Water-Resources Investigations. [Reston, VA]: U. S. Geological Survey, 1972-.
- Water Resources Research. Washington, DC: American Geophysical Union, 1965-.
- The Windy City Speleonews. Chicago, IL: Windy City Grotto of the National Speleological Society, 1961-.

INTENTIONAL BLANK PAGE

World Dil. Houston, TX: [IRM, Inc., etc.], 1947-.

W.R.C. Research Report. Urbana, IL: University at Urbana-Champaign, Water Resources Center, 1973-.

Serials List

BIBLIOGRAPHY AND INDEX OF ILLINOIS GEOLOGY

BIBLIOGRAPHY

- Absher, James see Stout, Glenn E.
- Achtemeier, Gary L. see Changnon, Stanley A., Ur.
- Alexander, J. D. see Hinesly, T. D.
- Algermissen, S. T. see Hopper, M. G.
- Allaway, Bill. Why I am interested in fossils: Jewelry Making Gems & Minerals, Vol. 545, p. 48-49, March 1983.
- Allender, J. H.; and Ditmars, J. D. Field measurements of longshore currents on a barred beach: Coastal Engineering, Vol. 5, No. 4, p. 295-309, illus. (incl. 2 tables), 25 ref., 1981.
- Allison, Mel. Illinois Division of Water Resources: in Proceedings, Illinois water-data users meeting (Toler, L. G., compiler), Open-File Report (United States Geological Survey, 1978), p. 28-31, 1982. (Rep. No. 82-1001) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Denver Fed. Cent., Lakewood, CO, United States.
- Aspbury, George F. see Kirchner, James G.
- Atherton, Elwood see Norby, R. D.
- Avin, Matthew J. see Phillips, Tom L.
- Baird, G. C.; and Woodland, B. G. Pennsylvanian coalified rhizomorphs in Illinois; evidence for non-compressive coalification to bituminous coal rank: Sedimentology, Vol. 29, No. 1, p. 3-15, illus. (incl. 3 tables, sketch map, strat. col.), 32 ref., 1982.
- Baird, Gordon C.; and Woodland, Bertram G.
 Pennsylvanian coalfield rhizomorphs in
 Illinois evidence for non-compressive
 coalification to bituminous coal rank
 [abstr.]: in Abstracts of the proceedings of
 the 93rd annual meeting of the Geological
 Society of America (Thomas, William A.,
 chairperson), Abstracts with Programs Geological Society of America, Vol. 12, No. 7,
 p. 381, August 1980.
- Baker, R. G. see Kim, H. K.

- Balding, G. D. U. S. Geological Survey: in Proceedings, Illinois water-data users meeting (Toler, L. G., compiler), Open-File Report (United States Geological Survey, 1978), p. 31-34, 1982. (Rep. No. 82-1001) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Denver Fed. Cent., Lakewood, CO. United States.
- Bandopadhya, C. see Chugh, Y. P.
- Bandy, William F., Jr. Paleontology and stratigraphy of the Mattoon Formation (Pennsylvanian), Coles County, Illinois: Master's, 1981, Indiana Univ., Bloomington, IN. microfossils.
- Bandy, William F., Jr. Paleontology and stratigraphy of the Mattoon Formation (Pennsylvanian), Coles County, Illinois [abstr.]: in Geological Society of America, 94th annual meeting, Abstracts with Programs Geological Society of America, Vol. 13, No. 7, p. 402, September 1981.
- Barcelona, M. J. see Lembke, W. D.
- Barcelona, Michael J. Chemical characteristics of lake sediments: in Proceedings of a Round table on reclaiming and managing lakes in Illinois (Stout, Glenn E., director), Document Illinois Institute of Natural Resources, 81/06, p. 10-20, illus. (incl. i table), July 1981.
- Barcelona, Michael J.; and Wang, Woodrow.
 Usefulness of sediment oxygen demand as a tool for impoundment management: W.R.C. Research Report, Vol. 169, 35 p., illus. (incl. 6 tables), 37 ref., August 1982.
- Barcelona, Michael J. see also Stout, Glenn E.
- Bargh, B. L. see Hughes, R. E.
- Bargh, Margaret see Treworgy, Colin G.
- Barr, David J. see Elifrits, C. Dale
- Bauer, J. see Chugh, Y. P.
- Beaver, Harold H. A new hydrospire wall structure in the blastoid Pentremites [abstr.]: in Geological Society of America, 94th annual meeting, Abstracts with Programs -

- Geological Society of America, Vol. 13, No. 7, p. 405, September 1981.
- Bennett, Truman see Visocky, Adrian P.
- Benson, Curtis R. see Sasman, Robert T.
- Bhagwat, Subhash; and Robare, Philip. Cost of underground coal mining in Illinois: Illinois Mineral Note, Vol. 84, 14 p., illus. (incl. 7 tables), 7 ref., November 1982.
- Bickford, M. E.; and Van Schmus, W. R. Origin of middle Proterozoic granitic and rhyolitic rocks in the Midcontinent region of North America [abstr.]: in Geological Society of America, 94th annual meeting, Abstracts with Programs Geological Society of America, Vol. 13, No. 7, p. 410, September 1981.
- Bickford, M. E.; Van Schmus, W. R.; and Zietz, I. Interpretation of Proterozoic basement in the Midcontinent [abstr.]: in Geological Society of America, 94th annual meeting, Abstracts with Programs Geological Society of America, Vol. 13, No. 7, p. 410, September 1981.
- Bikerman, Michael; Lidiak, Edward G.; and Lewis, Richard. K-Ar ages of phlogopite from mica peridotite, Omaha oil field intrusion, Gallatin County, southern Illinois [abstr.]: in 16th annual meeting; North-Central Section, Geological Society of America (Anonymous), Abstracts with Programs Geological Society of America, Vol. 14, No. 5, p. 255, 1 table, March 1982.
- Birks, D. W. see Schnoor, J. L.
- Bleuer, N. K.; and Fraser, Gordon S. Late Wisconsinan history of the middle Wabash River valley [abstr.]: In Geological Society of America, 94th annual meeting (Hestor, Norman C., chairperson; et al.), Abstracts with Programs Geological Society of America, Vol. 13, No. 7, p. 411, 1981.
- Bleuer, Ned K. see Fraser, Gordon S.
- Bond, D. C.; and Cartwright, Keros. Pressure observations and water densities in aquifers and their relation to problems in gas storage: JPT. Journal of Petroleum Technology, Vol. 22, No. 12, p. 1492-1498, illus. (incl. sketch map), 14 ref., December 1970.
- Boyd, R. H. Indian artifacts and museums in Illinois and Missouri: Rocks and Minerals, Vol. 51, No. 4, p. 206-208, May 1976.
- Boyd, Stephen A.; Sommers, Lee E.; Nelson, Darrell W.; et al. Copper (II) binding by humic acid extracted from sewage sludge; an electron spin resonance study: Soil Science Society of America Journal, Vol. 47, No. 1, p. 43-46, illus. (incl. 2 tables), 28 ref., February 1983. Purdue Agric. Exp. Stn., J. Paper No. 8584.

- Brack, Sheila D. A Pennsylvanian flora from Murphysboro, Illinois [abstr.]: in Abstracts of papers to be presented at the Interdisciplinary meeting of the Canadian Botanical Association and the Botanical Society of America at the University of Alberta (Starr, Richard C., president), American Journal of Botany, Vol. 58, No. 5, Part 2, p. 468, June 1971.
- Bradford, Susan C.; and Killey, Myrna M.
 Geologic controls on mine subsidence in
 Illinois [abstr.]: in The Geological Society
 of America, North-Central Section, 15th annual
 meeting; with North-Central section of the
 Paleontological Society and the Pander Society
 (Biggs, Donald L., chairperson), Abstracts
 with Programs Geological Society of America,
 Vol. 13, No. 6, p. 271, March 1981.
- Braile, L. W.; Hinze, W. J.; Sexton, J. L.; et al. Ancient rift complex and related seismicity in the northern Mississippi Embayment area [abstr.]: in Geological Society of America, 94th annual meeting (Hestor, Norman C., chairperson; et al.), Abstracts with Programs Geological Society of America, Vol. 13, No. 7, p. 415, 1981.
- Braile, Lawrence W. see Sexton, John L.
- Brill, E. D., Jr. see Goulter, I. C.
- Brower, R. D. Illinois State Geological Survey: in Proceedings, Illinois water-data users meeting (Toler, L. G., compiler), Open-File Report (United States Geological Survey. 1978), p. 15-22, 1982. (Rep. No. 82-1001) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Denver Fed. Cent., Lakewood, CO, United States.
- Brower, R. D. see also Cartwright, K.
- Brown, Floyd W. see Hatcher, Patrick G.
- Buhr, Richard see Stout, Glenn E.
- Bunker, Bill J.; Witzke, Brian J.; Ludvigson, Greg A.; et al. Recurrent mid to late Paleozoic deformation along the Plum River fault zone (PRFZ), upper Mississippi Valley, USA [abstr.]: in 16th annual meeting; North-Central Section, Geological Society of America (Anonymous), Abstracts with Programs Geological Society of America, Vol. 14, No. 5, p. 256, March 1982.
- Buschbach, T. C.; Cyrier, R. T.; and Heim, G. E. Geology and deep tunnels in Chicago: in Geology under cities (Legget, Robert F., editor), Reviews in Engineering Geology, Vol. 5, p. 41-54, illus. (incl. geol. sketch maps), 17 ref., 1982.
- Byerlee, J. D. see Moore, D. E.
- Cahill, R. A.; Frost, J. K.; Camp, L. R.; et al. Application and comparison of neutron activation analysis with other analytical

- methods for the analysis of coal: *in* Atomic and nuclear methods in fossil energy research; proceedings of the American Nuclear Society conference (Filby, Royston H., editor; *et al.*), Plenum Press, New York, NY, United States, p. 115-131, illus. (incl. 5 tables, sketch map), 8 ref., 1982.
- Cahill, Richard A.; and Gross, David L.
 Sedimentology and geochemistry of backwater lakes on the Illinois River [abstr.]: in 95th annual meeting, The Geological Society of America (Braunstein, Jules, chairperson; et al.), Abstracts with Programs Geological Society of America, Vol. 14, No. 7, p. 458, August 1982.
- Calengas, Peter L.; and Klasner, John S.
 Electrical resistivity and soil studies at the Range archaeological site (11-S-47), St. Clair County, Illinois [abstr.]: in The Geological Society of America, North-Central Section, 15th annual meeting; with North-Central section of the Paleontological Society and the Pander Society (Biggs, Donald L., chairperson), Abstracts with Programs Geological Society of America, Vol. 13, No. 6, p. 273, March 1981.
- Camp, L. R. see Cahill, R. A.
- Carozzi, Albert V. see Kuhnhenn, Gary Lee
- Carpenter, G. L. see Van den Berg, Jacob
- Cartwright, K.; Hunt, C. S.; Brower, R. D.; et al. Pore-water pressure in the roof of an underground coal mine in Illinois: Ground Water, Vol. 21, No. 3, p. 311-316, illus. (incl. sect.), 11 ref., June 1983.
- Cartwright, Keros see Bond, D. C.
- -- see Gibb, James P.
- -- see Gilkeson, Robert H.
- -- see Kempton, John P.
- -- see Vaiden, Robert
- Caserotti, Phillip M. Geology and geophysics of Spring Garden area, Jefferson County, Illinois: in Proceedings of the technical sessions, Kentucky Oil and Gas Association, forty-third annual meeting (Luther, Margaret K., editor), Special Publication Kentucky Geological Survey, Vol. 7, p. 1-22, illus. (incl. 1 table, sects., sketch maps), 1 ref., 1983.
- Changnon, Stanley A., Jr. Causes and
 implications of record windblown dust
 conditions during 1981 in Illinois: Circular
 Illinois State Water Survey, Vol. 151, 24
 p., illus. (incl. 13 tables, sketch maps), 14
 ref., 1982.
- Changnon, Stanley A., Jr.; Achtemeier, Gary L.; Hilberg, Steven D.; et al. The 1980-1981

- drought in Illinois; causes, dimensions, and impacts: Report of Investigation Illinois State Water Survey, Vol. 102, 113 p., illus. (incl. sketch map), 40 ref., 1982. (Rep. No. ISWS/RI-102/82).
- Chauff, K. M. Multielement conodont species from the Osagean (Lower Carboniferous) in Midcontinent North America and Texas: Palaeontographica. Abteilung A: Palaozoologie-Stratigraphie, Vol. 175, No. 4-6, p. 140-169, illus. (incl. 3 tables, 4 plates, sketch map, strat. col.), 49 ref., 1981.
- Cheng, Shui-Tuang. Overtopping risk evaluation for an existing dam: 214 p., Doctoral, 1982, Univ. of Illinois, Urbana, IL. available from: Univ. Microfilms.
- Chou, Chen-Lin. Trace element geochemistry of Herrin (No. 6) Coal in the Illinois Basin [abstr.]: in 16th annual meeting; North-Central Section, Geological Society of America (Anonymous), Abstracts with Programs Geological Society of America, Vol. 14, No. 5, p. 256, March 1982.
- Chugh, Y. P.; Bauer, J.; and Bandopadhya, C. Effect of weak floor interaction on stability of coal pillars [abstr.]: *in* 17th application of computers and operations research in the mineral industry (Johnson, Thys B., editor; *et al.*), Application of Computer Methods in the Mineral Industry, Vol. 17, p. 225, 1982.
- Chugh, Yoginder P.; and Silverman, M.
 Preliminary investigations for underground
 coal mines [abstr.]: in AAPG Eastern Section
 meeting, in conjunction with New York State
 Geological Association meeting (Anonymous),
 AAPG Bulletin, Vol. 66, No. 8, p. 1165-1166,
 August 1982.
- Cluff, R. M. see Harvey, R. D.
- Cluff, Robert M. Paleoenvironment of the New Albany Shale Group (Devonian-Mississippian) of Illinois: Journal of Sedimentary Petrology, Vol. 50, No. 3, p. 767-780, illus. (incl. sect., sketch maps), 17 ref., September 1980.
- Cluff, Robert M. Depositional environments and diagenesis of Salem Limestone (Middle Mississippian) reservoirs in southern Illinois [abstr.]: in Association round table: 1981 AAPG annual convention with divisions; SEPM/EMD/DPA; technical program summaries and abstracts (Anonymous), AAPG Bulletin, Vol. 65, No. 5, p. 911, May 1981.
- Cluff, Robert M. A preliminary assessment of the natural gas potential of the New Albany Shale Group in Illinois: in Proceedings of the technical sessions, Kentucky Oil and Gas Association, forty-third annual meeting (Luther, Margaret K., editor), Special Publication Kentucky Geological Survey, Vol. 7, p. 52-64, illus. (incl. sect., sketch maps), 15 ref., 1983.

- Cluff, Robert M.; Reinbold, Mark L.; and Lineback, Jerry A. The New Albany Shale Group of Illinois: Circular - Illinois State Geological Survey, Vol. 518, 83 p., illus. (incl. 5 tables, geol. sketch maps; struc. contour maps. 1:462,440), 80 ref., 1981.
- Collinson, Charles. Holocene and modern history of a beach ridge and dune plane, Lake Michigan: Proceedings Workshop on Great Lakes Coastal Erosion and Sedimentation = Comptes Rendus Atelier sur l'Erosion et la Sedimentation Cotieres dans les Grands Lacs, Vol. 3, p. 77-79, sketch map, 4 ref., 1983.
- Costanza, S. H.; and Harvey, R. D. SEM-EDX characterization of macerals in dull and impure coal layers, Herrin Coal, Illinois [abstr.]: in 16th annual meeting; North-Central Section, Geological Society of America (Anonymous), Abstracts with Programs Geological Society of America, Vol. 14, No. 5, p. 257, March 1982.
- Coveney, Raymond M., Jr.; and Martin, Sharon P.
 Molybdenum and other heavy metals of the Mecca
 Quarry and Logan Quarry shales: Economic
 Geology and the Bulletin of the Society of
 Economic Geologists, Vol. 78, No. 1, p.
 132-149, illus. (incl. 16 anal., 5 tables), 70
 ref., February 1983.
- Cowart, James B. see Gilkeson, Robert H.
- Cyrier, R. T. see Buschbach, T. C.
- Danner, Stephen K.; and Nelson, W. John.
 Prediction of geologic anomalies in advance of mining; three case studies [abstr.]: in AAPG Eastern Section meeting, in conjunction with New York State Geological Association meeting (Anonymous), AAPG Bulletin, Vol. 66, No. 8, p. 1167, August 1982.
- Dave, Mehul see Stevering, Herman
- Davis, John A. An overview of micellar flooding: in Proceedings of the technical sessions, Kentucky Oil and Gas Association, Forty-first annual meeting (Luther, Margaret K., editor), Special Publication Kentucky Geological Survey, Vol. 5, p. 25-35, illus. (incl. 7 tables, sketch map), 10 ref., 1982.
- DeMaris, Philip J. Erosional channels in the Herrin (No. 6) Coal at Old Ben No. 24 Mine, Franklin County, Illinois [abstr.]: in 16th annual meeting; North-Central Section, Geological Society of America (Anonymous), Abstracts with Programs Geological Society of America, Vol. 14, No. 5, p. 258, March 1982.
- Dennis, R. L.; and Eggert, D. A. A new petrified medullosan pollen organ [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at the University of Minnesota (Heimsch, Charles, president), American Journal of Botany, Vol.

- 59, No. 6, Part 2, p. 660, July 1972.
- Deo, Susan R. see Stout, Glenn E.
- Ditmars, J. D. see Allender, J. H.
- Dobrovolny, E. E. see Hopper, M. G.
- Dohnalek, David A.; and FitzPatrick, Joseph A.
 The chemistry of reduced sulfur species and
 their removal from groundwater supplies: in
 Better water for the Americas (Anonymous),
 Proceedings, AWWA Annual Conference, Vol.
 1982, p. 255-282, illus. (incl. 5 tables), 43
 ref., 1982.
- Dolske, Donald A. see Sievering, Herman
- DuMontelle, P. B. see Harvey, R. D.
- Dutch, Steven I. A three-plate model of the Midcontinent Gravity High [abstr.]: in The Geological Society of America, North-Central Section, 15th annual meeting; with North-Central section of the Paleontological Society and the Pander Society (Biggs, Donald L., chairperson), Abstracts with Programs Geological Society of America, Vol. 13, No. 6, p. 276, March 1981.
- Dwyer, John J. see Nuttli, Otto W.
- Dyer, Rolla McIntyre. Reservoir identification by chromatographic methods: in Proceedings of the technical sessions, Kentucky Oil and Gas Association, forty-second annual meeting (Luther, Margaret K., editor), Special Publication Kentucky Geological Survey, Vol. 6, p. 32-36, illus. (incl. strat. cols., sketch map), 1983.
- Eberl, Dennis D. see Rimmer, Susan M.
- Eckert, Stephen M. Drainage evolution of the Bureau Creek basin, in central-northern Illinois: Transactions of the Illinois State Academy of Science, Vol. 75, No. 3-4, p. 297-300, illus. (incl. 1 table, sketch map), 7 ref., 1982.
- Edkins, John E. Geochemical assessment of a sulfide-bearing coal waste deposit in southwestern Illinois: Master's, 1981, Indiana Univ., Bloomington, IN.
- Eggert, D. A. see Dennis, R. L.
- -- see Rothwell, G. W.
- Eggert, D. L. The Galatia Channel, a
 Pennsylvanian channel complex in western
 Gibson County, Indiana [abstr.]: in 16th
 annual meeting; North-Central Section,
 Geological Society of America (Anonymous),
 Abstracts with Programs Geological Society
 of America, Vol. 14, No. 5, p. 259, March
 1982.
- Eggert, Donald A. see Millay, Michael A.

- Eheart, J. W.; and Wong, B. D. C. Water rights for humid regions [abstr.]: in American Geophysical Union; 7th annual Midwest meeting (Murthy, V. Rama, convener), Eos.
 Transactions, American Geophysical Union, Vol. 63, No. 33, p. 613, August 17, 1982.
- Elifrits, C. Dale; and Barr, David J.

 Application of remote sensing to subsidence detection at a room-and-pillar coal mine: in Remote sensing for resource management (Johannsen, Chris J., editor; et al.), Soil Conserv. Soc. Am., Ankeny, IA, United States, p. 347-361, 2 tables, 5 ref., 1982.

Elyn, Jaclyn Rendall see Van den Berg, Jacob

Evans, Ralph L. see Kothandaraman, V.

Faillace, George A. see Silver, Marshall L.

Fav. L. P. see Frest, T. J.

Fehrenbacher, J. B. see Lembke, W. D.

Fenster, David F. see Trapp, John S.

Fishbaugh, David A. see Fraser, Gordon S...

Fisher, Paul R. see Krinitzsky, Ellis L.

Fisher, R. A. see Schnoor, J. L.

FitzPatrick, Joseph A. see Dohnalek, David A.

Follmer, Leon R. see Heinrich, Paul V.

- Foster, James B. Sheffield, Illinois: in U. S. Geological Survey research in radioactive waste disposal; fiscal year 1980 (Schneider, Robert; et al.), Open-File Report (United States Geological Survey. 1978), p. 90-91, 1 ref., 1982. (Rep. No. 82-0509) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Denver, CD, United States.
- Fraser, Gordon S.; Bleuer, Ned K.; and Fishbaugh, David A. Sedimentology of terrace deposits at bend area of Wabash River [abstr.]: in 1981 AAPG annual convention with divisions; SEPM/EMD/DPA, AAPG Bulletin, Vol. 65, No. 5, p. 927, 1981.

Fraser, Gordon S. see also Bleuer, N. K.

- Frasz, Geoffrey. Brainard Cave, Jersey County, Illinois: The Windy City Speleonews, Vol. 22, No. 6, p. 97, December 1982.
- Frasz, Geoffrey B. Twenty miles under Illinois; the land and the caves: NSS News, Vol. 41, No. 2, p. 72-76, illus., January 1983.

Fraunfelter, G. see McKay, R. H.

Fraunfelter, George H. see Jennings, James R.

-- see Stanley, Roderick G.

Frest, T. J.; and Fay, L. P.
Woodfordian-Holocene mollusc biogeography of
Iowa and Illinois [abstr.]: in The Geological
Society of America, North-Central Section,
15th annual meeting; with North-Central
section of the Paleontological Society and the
Pander Society (Biggs, Donald L.,
chairperson), Abstracts with Programs Geological Society of America, Vol. 13, No. 6,
p. 278, March 1981.

Frost, J. K. see Cahill, R. A.

-- see Harvey, R. D.

Frost, Robert R. see Thomas, Josephus, Jr.

Fuentes, R. F. see Patterson, G. L.

Garklavs, George see Graf, J. B.

Garney, Ronald T. Fauna of the Racine Dolomite
(Niagaran), Grafton, Illinois: Master's,
1983, Univ. of Missouri, Columbia, MD.

Garske, E. E. see Lembke, W. D.

Geadelmann, C. O. see Schnoor, J. L.

Gemmell. Robert S. see Krause. Terry L.

Gerstle, Kurt H. see Ko. Hon-Yim

Giaquinta, A. R. see Schnoor, J. L.

- Gibb, James P.; and Cartwright, Keros.
 Retention of zinc, cadmium, copper, and lead
 by geologic materials: Cooperative
 Groundwater Report (Illinois State Geological
 Survey: 1981), Vol. 9. 113 p., illus. (incl.
 18 anal., tables, geol. sketch maps), 18 ref.,
 1982.
- Gibb, James P. see also Visocky, Adrian P.
- Gilkeson, Robert H.; and Cowart, James B. A preliminary report on /238_uranium series disequilibrium in groundwater of the Cambrian-Ordovician aquifer system of northeastern Illinois: in Isotope studies of hydrologic processes; selected papers from a symposium (Perry, Eugene C., Jr., editor; et al.), North. Ill. Univ. Press, De Kalb, IL, United States, p. 109-118, illus. (incl. 2 tables, sketch maps), 19 ref., 1982.
- Gilkeson, Robert H.; Perry, Eugene C., Jr.; and Cartwright, Keros. Isotopic and geologic studies to identify the sources of sulfate in groundwater containing high barium concentrations: 39 p., illus. (incl. 3 tables, geol. sketch maps), 38 ref., November 1981. (Rep. No. UILU-WRC-81-0165) available from: Univ. Ill., Water Resour. Cent., Urbana-Champaign, IL, United States (ISGS contract/grant report; 1981-4).
- Gilkeson, Robert H. see also Perry, Eugene C., Jr.

- Glass, Herbert D. see Heinrich, Paul V.
- Good, Charles W. Studies of Sphenophyllum shoots; species delimitation within the taxon Sphenophyllum: American Journal of Botany, Vol. 60, No. 9, p. 929-939, illus., 29 ref., October 1973.
 - Good, Charles W. Studies of calamitean cones; further diversity of sporangiophore position and organization [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at the University of Massachusetts (Anonymous), American Journal of Botany, Vol. 60, No. 4, Supplement, p. 17, April 1973. Meetings of the Botanical Society of America and certain affiliated groups at the University of Massachusetts.
 - Goodwin, Jonathan H.; and Masters, John M.
 Geology of aggregate resources of Illinois:
 in Proceedings of 18th forum on geology of
 industrial minerals; Theme: Construction
 materials (Ault, Curtis H., editor; et al.),
 Geological Survey Occasional Paper
 (Bloomington), Vol. 37, p. 61-90, illus.
 (incl. 1 table, geol. sketch maps), 32 ref.,
 1983.
 - Goodwin, Jonathan H.; and Masters, John M.
 Sedimentology and bathymetry of Pool 26,
 Mississippi River: Environmental Geology
 Notes, Vol. 103, 76 p., illus. (incl. tables,
 geol. sketch maps), 16 ref., February 1983.
 - Gopinath, V. S. see Schnoor, J. L.
 - Goulter, I. C.; Kiely, D. A.; Hopkins, L. D.; et al. Analyzing floodplain policies using an interdependent land use allocation model: Water Resources Research, Vol. 19, No. 2, p. 585-587, 11lus. (incl. sketch map), 5 ref., April 1983. For reference to paper by Hopkins, L. D., et al., see Water Resour. Res., Vol. 17, p. 469, 1981.
 - Graf, J. B.; Garklavs, George; and Oberg, K. A.
 Time of concentration and storage coefficient
 values for Illinois streams: Water-Resources
 Investigations, WRI 82-13, 41 p., 1982. (Rep.
 No. PB-82 219 320) available from: NTIS,
 Springfield, VA, United States.
 - Grason, David. A presentation and evaluation of the hydrologic information available for the major federal coal lands in seven Eastern States; sources of available information and a plan for future work: Open-File Report (United States Geological Survey. 1978), 335 p., illus. (incl. 5 tables, sketch maps), 14 ref., 1982. (Rep. No. 82-0525) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Denver, CO, United States.
 - Gross, David L. see Cahill, Richard A.
 - Grundl, T. see Perry, Eugene C., Jr.

- Guntermann, Karl L.; Lee, Ming T.; and Swanson, Earl R. The off-site sediment damage function in selected Illinois watersheds: Journal of Soil and Water Conservation, Vol. 30, No. 5, p. 219-224, illus. (incl. 3 tables), 28 ref., October 1975.
- Gustavson, John B. Dyersburg Quadrangle, Illinois, Kentucky, Missouri, and Tennessee: 30 p., illus. (incl. 2 tables; econ. geol. maps 1:500,000; geol. map 1:500,000), 76 ref., August 1982. (Rep. No. PGJ/F-103(82)) available from: Bendix Field Eng. Corp., Tech. Libr., Grand Junction, CO, United States. National Uranium Resource Evaluation Program; includes microfiche.
- Haigh, Martin J.; and Wallace, William L. Erosion of strip mine dumps in La Salle County, Illinois; preliminary results: Earth Surfaces Processes and Landforms, Vol. 7, No. 1, p. 79-84, illus. (incl. sketch map, sect.), 1 p. ref., February 1982.
- Hajic, Edwin R. Geology and paleopedology of the Koster archeological site, Greene County, Illinois [abstr.]: in The Geological Society of America, North-Central Section, 15th annual meeting; with North-Central section of the Paleontological Society and the Pander Society (Biggs, Donald L., chairperson), Abstracts with Programs Geological Society of America, Vol. 13, No. 6, p. 279, March 1981.
- Hajic, Edwin Robert. Geology and paleopedology of the Koster archeological site, Greene County, Illinois: 107 p., sketch maps, geol. map, Master's, 54 ref., 1981, Univ. of Iowa, Iowa City, IA.
- Hall, John W. see Stidd, Benton M.
- Harris, D. G. The role of geology in reservoir simulation studies: JPT. Journal of Petroleum Technology, Vol. 27, No. 5, p. 625-632, illus. (incl. block diag., sketch map), in ref., May 1975.
- Harris, D. G.; and Hewitt, C. H. Synergism in reservoir management; the geologic perspective: JPT. Journal of Petroleum Technology, Vol. 29, No. 7, p. 761-770, illus. (incl. geol. sketch maps), 36 ref., July 1977.
- Harvey, R. D.; White, W. A.; Cluff, R. M.; et al. Petrology of New Albany Shale Group (Upper Devonian and Kinderhookian) in the Illinois Basin; a preliminary report: in Preprints, First Eastern gas shales symposium (Schott, Garry L., editor; et al.), U. S. Energy Res. Dev. Adm., Morgantown Energy Res. Cent., Morgantown, WV, United States, p. 239-265, illus. (incl. 8 tables, sketch map), 17 ref., 1977.
- Harvey, R. D. see also Costanza, S. H.
- Hatcher, Patrick G.; Lyons, Paul C.; Thompson, Carolyn L.; et al. Organic matter in a coal ball; peat or coal?: Science, Vol. 217, No.

4562, p. 831-833, illus., 11 ref., August 27, 1982.

Heffelfinger, S. R. see Lembke, W. D.

Heim, G. E. see Buschbach, T. C.

Heinrich, Paul V.; Johnson, W. Hilton; Glass, Herbert D.; et al. Sedimentology and Woodfordian history of Lake Saline, southern Illinois [abstr.]: in The Geological Society of America, North-Central Section, 15th annual meeting; with North-Central section of the Paleontological Society and the Pander Society (Biggs, Donald L., chairperson), Abstracts with Programs - Geological Society of America, Vol. 13, No. 6, p. 281, illus., March 1981.

Herrmann, R. B. see Himes, L. D.

Hewitt, C. H. see Harris, D. G.

Heyl, Allen V.; and West, Walter S. Outlying mineral occurrences related to the Upper Mississippi Valley mineral district, Wisconsin, Iowa, Illinois, and Minnesota: Economic Geology and the Bulletin of the Society of Economic Geologists, Vol. 77, No. 8, p. 1803-1817, strat. col., sketch map, 28 ref., December 1982.

Hickey, David R.; and Younker, Jean L.
Ecophenotypic variability in some Upper
Pennsylvanian Myalindae [abstr.]: in The
Geological Society of America, North-Central
Section, 15th annual meeting; with
North-Central section of the Paleontological
Society and the Pander Society (Biggs, Donald
L., Chairperson), Abstracts with Programs Geological Society of America, Vol. 13, No. 6,
p. 281, March 1981.

Hickmann, T. J. see Nawrot, J. R.

Hilberg, Steven D. see Changnon, Stanley A., Jr.

Hill, James J.; and Tuchman, Robert J. The mineral industry of Illinois: U. S. Bur. Mines, United States, 12 p., illus., 1987. Preprint from Minerals yearbook, 1981, U. S. Bur. Mines.

Himes, L. D.; and Herrmann, R. B. A joint hypocenter relocation study in the New Madrid seismic zone [abstr.]: in 78th annual meeting, Seismological Society of America, abstracts (Long, Tim, editor), Earthquake Notes, Vol. 54, No. 1, p. 30, March 1982.

Hinesly, T. D.; Redborg, K. E.; Ziegler, E. L.;
et al. Effect of soil cation exchange
capacity on the uptake of cadmium by corn:
Soil Science Society of America Journal, Vol.
46, No. 3, p. 490-497, illus. (incl. 6
tables), 11 ref., June 1982.

Hinze, W. J. see Braile, L. W.

Hinze, William J. see Sexton, John L.

Hopke, P. K. see Roscoe, B. A.

Hopkins, L. D. see Goulter, I. C.

Hopper, M. G.; Algermissen, S. T.; and Dobrovolny, E. E. Estimation of earthquake effects associated with a great earthquake in the New Madrid seismic zone: Open-File Report (United States Geological Survey. 1978), 101 p., illus. (incl. 6 tables, sketch maps), 45 ref., 1983. (Rep. No. 83-0179) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Denver Fed. Cent., Lakewood, CO, United States.

Hoppin, Richard A. see Bunker, Bill J.

Howard, James. Some results of Eastern Gas
Shale Program of interest to Illinois Basin
operators: in Proceedings of the technical
sessions, Kentucky Oil and Gas Association,
forty-second annual meeting (Luther, Margaret
K., editor), Special Publication - Kentucky
Geological Survey, Vol. 6, p. 13-15, 1983.

Hughes, R. E.; Bargh, B. L.; and White, W. A. Expansion and weathering of brick: in Proceedings of 18th forum on geology of industrial minerals; Theme: Construction materials (Ault, Curtis H., editor; et al.), Geological Survey Occasional Paper (Bloomington), Vol. 37, p. 183-197, illus. (incl. 1 table), 41 ref., 1983.

Hughes, Richard L. see Sievering, Herman

Hunt, C. S. see Cartwright, K.

Illinois Abandoned Mined Lands Reclamation Council. Illinois State reclamation plan for abandoned mined lands: 146 p., illus., July 1980. available from: Ill. Abandoned Mined Lands Reclamation Counc., Ill., United States.

Jackson, Stephen T.; and Miller, Norton G,
Paleoecology of a fossil plant assemblage from
a pre-Wisconsinan till in southern Illinois:
American Midland Naturalist, Vol. 109, No. 1,
p. 120-135, illus. (incl. 4 tables), 77 ref.,
January 1983.

Jacobson, Russell J. Murphysboro coal, Jackson
and Perry counties; resources with low to
medium sulfur potential: Illinois Mineral
Note, Vol. 85, 19 p., illus. (incl. 2 tables,
geol. sketch maps), 15 ref., 1983.

Jarboe, Jacquelyn see Kirk, James R.

Jenkusky, S. M. see Nawrot, J. R.

Jennings, J. R. A lycopod from the Salem
Limestone (Mississippian) of Illinois
[abstr.]: in Program with abstracts of papers
to be presented at the meetings of the
Botanical Society of America and certain
affiliated groups (Canright, James E.,
chairperson), American Journal of Botany, Vol.
57, No. 6, Part 2, p. 756, July 1970.
Meetings of the Botanical Society of America

and certain affiliated groups.

- Jennings, James R. The morphology of Stigmaria stellata Goeppert [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at the University of Minnesota (Heimsch, Charles, president), American Journal of Botany, Vol. 59, No. 6, Part 2, p. 661, July 1972.
- Jennings, James R.; and Fraunfelter, George H.

 Macropaleontology of the uppermost
 Mississippian and basal Pennsylvanian strata
 in the southern part of the Illinois Basin
 [abstr.]: in The Geological Society of
 America, North-Central Section, 15th annual
 meeting; with North-Central section of the
 Paleontological Society and the Pander Society
 (Biggs, Donald L., chairperson), Abstracts
 with Programs Geological Society of America,
 Vol. 13, No. 6, p. 282, March 1981.
- Johnson, W. Hilton. Variability in the nature and types of glacial sedimentation within the Woodfordian Substage in Illinois [abstr.]: in The Geological Society of America, North-Central Section, 15th annual meeting; with North-Central section of the Paleontological Society and the Pander Society (Biggs, Donald L., chairperson), Abstracts with Programs Geological Society of America, Vol. 13, No. 6, p. 283, March 1981.
- Johnson, W. Hilton. Patterned ground in central Illinois; evidence for permafrost during the last glaciation [abstr.]: in Character and timing of rapid environmental and climatic changes (Markgraf, Vera, chairperson; et al.), Am. Quat. Assoc., Natl. Conf., Abstr., Vol. 7, p. 111, 1982. Seventh biennial conference of the American Quaternary Association.
- Johnson, W. Hilton see also Heinrich, Paul V.
- -- see also Moore, David W.
- Jones, Bob. Pyrite and fluorite: Rock & Gem, Vol. 12, No. 12, p. 40-47, 79, illus., December 1982.
- Kanana, Ya. F. see Matveyev, A. K.
- Keller, G. R. see Braile, L. W.
- Kemmis, T. J. Subglacial mixing processes and the matrix uniformity of basal tills of the Laurentide ice sheet in Iowa and Illinois, U.S.A. [abstr.]: in The Geological Society of America, North-Central Section, 15th annual meeting; with North-Central section of the Paleontological Society and the Pander Society (Biggs, Donald L., chairperson), Abstracts with Programs Geological Society of America, Vol. 13, No. 6, p. 284, March 1981.
- Kempton, John P.; and Cartwright, Keros.
 Implications of stratigraphic studies to
 mapping regional distribution of drift
 aquifers in Illinois [abstr.]: in 16th annual

- meeting; North-Central Section, Geological Society of America (Anonymous), Abstracts with Programs Geological Society of America, Vol. 14, No. 5, p. 264, March 1982.
- Kempton, John P.; Morse, Walter J.; and Visocky, Adrian P. Hydrogeologic evaluation of sand and gravel aquifers for municipal groundwater supplies in East-central Illinois: Cooperative Ground-Water Report. Illinois, State Water Survey, Vol. 8, 59 p., illus. (incl. 5 tables, geol. sketch maps), 45 ref., June 1982.
- Kempton, John P. see also Vaiden, Robert
- Kepferle, Roy C. Organic-rich shale (Devonian and Mississippian) in the eastern interior United States [abstr.]: in Proceedings of the 1981 Eastern oil shale symposium (Sanders, Ronald L., chairperson), Univ. Ky., Inst. Min. Miner. Res., Lexington, KY, United States, p. 159, 1981.
- Kesling, Robert V. see Linsley, Robert M.
- Kiefer, Linus M. Soil survey of Iroquois County, Illinois: U. S. Dep. Agric., Soil Conserv. Serv., Washington, DC, United States, 184 p., illus. (incl. 18 tables; soils maps 1:15,840; colored soils maps 1:253,440), 13 ref., October 1982. (Publ. in coop. with Ill. Agric. Exp. Stn.).
- Kiely, D. A. see Goulter, I. C.
- Killey, Myrna M. see Bradford, Susan C.
- Kim, H. K.; and Baker, R. G. Late- and postglacial pollen studies from the Zuehl farm site, north-central Iowa and Cattail Channel Bog, northwestern Illinois [abstr.]: in Abstracts of papers, 95th session of the Iowa Academy of Science (Anonymous), The Proceedings of the Iowa Academy of Science, Vol. 90, No. 1, March 1983.
- King, James E. Late Quaternary vegetation of Illinois, USA [abstr.]: in Fifth international palynological conference; volume of abstracts (Chaloner, W. G., editor; et al.), Abstracts - International Palynological Conference, Vol. 5, p. 201, 1980.
- King, James E. Quaternary paleoenvironmental changes in Illinois [abstr.]: in The Geological Society of America, North-Central Section, 15th annual meeting; with North-Central section of the Paleontological Society and the Pander Society (Biggs, Donald L., chairperson), Abstracts with Programs Geological Society of America, Vol. 13, No. 6, p. 284, March 1981.
- King, M. J. see Skjei, R. E.
- Kirchner, James G.; Nelson, Robert S.; and Aspbury, George F. Statistical confirmation of the field discrimination of till units with particular reference to a local Radnor section

in Woodford County, Illinois: Transactions of the Illinois State Academy of Science, Vol. 75, No. 3-4, p. 253-266, illus. (incl. 5 tables), 12 ref., 1982.

Kirk, James R.; Jarboe, Jacquelyn; Sanderson, Ellis W.; et al. Water withdrawals in Illinois, 1980: Circular - Illinois State Water Survey, Vol. 152, 47 p., illus. (incl. 22 tables, sketch maps), 46 ref., 1982.

Klasner, John S. see Calengas, Peter L.

Klimstra. W. D. see Nawrot. J. R.

Knapp, H. Vernon see Changnon, Stanley A., Jr.

Ko, Hon-Yim; and Gerstle, Kurt H. Elastic properties of two coals: International Journal of Rock Mechanics and Mining Sciences, Vol. 13, No. 3, p. 81-90, illus. (incl. 2 tables), 16 ref., March 1976.

Koch, William F., II. Brachiopod paleoecology, paleobiogeography, and biostratigraphy in the upper Middle Devonian of eastern North America; an ecofacies model for the Appalachian, Michigan, and Illinois basins: Doctoral, 1979, Oregon State Univ., Corvallis, OR

Kolata, Dennis see Votaw, Robert B.

Kosanke, Robert M. Illustrations and comments concerning the type specimens of Calamospora, Florinites, and Raistrickia: Journal of Paleontology, Vol. 56, No. 5, p. 1171-1176, 1 plate, 9 ref., September 1982.

Kothandaraman, V.; Sinclair, Robert A.; and Evans, Ralph L. Water chemistry of the Illinois Waterway: Circular - Illinois State Water Survey, Vol. 147, 23 p., illus. (incl. 15 tables, sketch map), 12 ref., 1981.

Kowallis, Bart Joseph. Velocity behavior of rocks related to microcracks, micropores, and pore-fillings: 160 p., Doctoral, 1981, Univ. of Wisconsin, Madison, WI. available from: -Univ. Microfilms.

Krause, Terry L.; and Gemmell, Robert S.
 Evaluation of bar1um removal methods for
 groundwater supplies: in Better water for the
 Americas (Anonymous), Proceedings, AWWA Annual
 Conference, Vol. 1982, p. 293-330, illus.
 (incl. 15 tables, sketch maps), 11 ref., 1982.

Krinitzsky, Ellis L.; and Fisher, Paul R.
Comments on earthquake hazards to dams in the
New Madrid area [abstr.]: in 16th annual
meeting; North-Central Section, Geological
Society of America (Anonymous), Abstracts with
Programs - Geological Society of America, Vol.
14, No. 5, p. 264, March 1982.

Krothe, Noel C. Environmental aspects of ground
water and surface water chemistry of the
Carbondale Group of Indiana and Illinois
[abstr.]: in 16th annual meeting;

North-Central Section, Geological Society of America (Anonymous), Abstracts with Programs -Geological Society of America, Vol. 14, No. 5, p. 264, March 1982.

Kuhnhenn, Gary Lee; and Carozzi, Albert V.
Carbonate microfacies of the Platteville Group (Middle Ordovician), Lee and Lasalle counties, Illinois: Archives des Sciences, Vol. 30, No. 2, p. 179-212 (incl. French sum.), illus. (incl. 2 tables, 3 plates, sketch maps), 32 ref.. August 1977.

Kurtz, K. B. see Goulter, I. C.

Kurtz, L. T. see Mulvaney, R. L.

Laughnan, Penelope F. see Phillips, Tom L.

Lee, Ming T. see Guntermann, Karl L.

Lehmann, P. J. see McGovney, James E.

Leisman, G. A. Linopteris in American coal balls [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at the University of Minnesota (Heimsch, Charles, president), American Journal of Botany, Vol. 59, No. 6, Part 2, p. 661. July 1972.

Leisman, G. A.; and Peters, J. S. Rhetinotheca tetrasolenata gen. et sp. n., an Aulacotheca-like fructification [abstr.]: in Program with abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups (Canright, James E., chairperson), American Journal of Botany, Vol. 57, No. 6, Part 2, p. 758, July 1970. Meetings of the Botanical Society of America and certain affiliated groups.

Leisman, Gilbert A.; and Peters, John S. A new pteridosperm male fructification from the Middle Pennsylvanian of Illinois: American Journal of Botany, Vol. 57, No. 7, p. 867-873, illus., 5 ref., August 1970.

Lembke, W. D.; Mitchell, J. K.; Fehrenbacher, J. B.; et al. Dredged sediment for agriculture; Lake Paradise: W.R.C. Research Report, Vol. 175, 58 p., illus. (incl. tables, sketch maps), 21 ref., January 1983. (Rep. No. UILU-WRC-83-0175) available from: Univ. Ill. Water Resour. Cent., Urbana, IL, United States.

Lewis, Richard. Petrology and mineralogy of the monticellite alnoite associated with the Omaha oil field, Gallatin County, Illinois [abstr.]:

in Abstracts with programs; Geological Society of America North-Central Section 16th annual meeting (Anonymous), Abstracts with Programs Geological Society of America, Vol. 14, No. 5, p. 265, March 1982.

Lewis, Richard see also Bikerman, Michael

Lidiak, Edward G. see Bikerman, Michael
-- see Braile, L. W.

Lindau, Robert D. see Van den Berg, Jacob

Lineback, Jerry A. see Cluff, Robert M.

Linsley, Robert M.; and Kesling, Robert V. A
Detroit River (Middle Devonian) fauna from the
subsurface of Illnois: Journal of
Paleontology, Vol. 56, No. 5, p. 1079-1092, 1
table, 2 plates, 8 ref., September 1982.

Lonnquist, Carl see Kirk, James R.

Lovely, Daniel A. The application of remote sensing for the detection of Niagaran pinnacle reefs in the Illinois Basin [abstr.]: in Abstracts with programs; Geological Society of America North-Central Section 16th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 14, No. 5, p. 265, March 1982.

Ludvigson, Greg A. see Bunker, Bill J.

Ludwigs, R. Scott see Sasman, Robert T.

Lyons, Paul C. see Hatcher, Patrick G.

Maciel, Gary E. see Hatcher, Patrick G.

Mandle, R. J. see Siegel, D. I.

Martin, Sharon P. see Coveney, Raymond M., Jr.

Martin, Willard E. Warsaw geodes: Jewelry Making Gems & Minerals, Vol. 545, p. 63-64, 67, illus., March 1983.

Maslowski, Andy. Exploration activity increases in Illinois Basin: AAPG Explorer, Vol. 4, No. 6, p. 36-37, February 1983.

Masters, John M. see Goodwin, Jonathan H.

-- see Reinertsen, David L.

Matten, Lawrence C. Upper Cretaceous of Illinois; a preliminary survey [abstr.]: in Abstracts of papers to be presented at the Interdisciplinary meeting of the Canadian Botanical Association and the Botanical Society of America at the University of Alberta (Starr, Richard C., president), American Journal of Botany, Vol. 58, No. 5, Part 2, p. 470, June 1971.

Matveyev, A. K.; and Kanana, Ya. F.
Regional'naya zonal'nost' rudoobrazovaniya i
metamorfizma ugley [Regional zonal
distribution of ore formation and coal
metamorphism]: Spisanie na Bulgarskogo
Geologichesko Druzhestvo, Vol. 36, No. 2, p.
97-106 (incl. English sum.), illus. (incl.
sects., sketch map), 35 ref., 1975.

May, John R. Engineering geology and geomorphology of streambank erosion; Report 3,

The application of waterborne geophysical techniques in fluvial environments: Technical Report GL, Vol. 79-7, 239 p., illus. (incl. sketch maps), 68 ref., February 1982. available from: NTIS, Springfield, VA, United States.

McCoy, Patric see Sievering, Herman

McDonald, D. B. see Schnoor, J. L.

McGhee, George R., Jr.; and Richardson, Eugene S., Jr. First occurrence of the problematical fossil Vetacapsula in North America: Journal of Paleontology, Vol. 56, No. 5, p. 1295-1296, illus., 7 ref., September 1982.

McGinnis, L. D. see Wei, Meng Hua

McGovney, James E. Resedimented deposits and evolution of Thornton Reef (Niagaran), northeastern Illinois [abstr.]: in 1981 AAPG annual convention with division; SEPM/EMD/DPA, AAPG Bulletin, Vol. 65, No. 5, p. 957, May 1981.

McGovney, James E.; Lehmann, P. J.; and Sarg, J. F. Eustatic sea-level control of Silurian (Niagaran) reefs, Michigan Basin [abstr.]: in AAPG annual convention with divisions SEPM/EMD/DPA (Anonymous), AAPG Bulletin, Vol. 66, No. 5, p. 604, May 1982.

McKay, R. H.; and Fraunfelter, G. Trace fossils and environments of deposition of the Aux Vases Formation and the Joppa Member of the Ste. Genevieve Formation (Middle Mississippian) in southeastern Missouri and southern Illinois [abstr.]: in Abstracts; Annual meeting of the Missouri Academy of Science, School of the Ozarks (Jones, John R., editor), Transactions of the Missouri Academy of Science, Vol. 16, p. 167, 1982.

Merrill, Glen K. So-called limestone "concretions" in Pennsylvanian black "snales"; carbonate oases in Carboniferous carbonaceous environments [abstr.]: in The Geological Society of America, North-Central Section 15th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 13, No. 6, p. 309, March 1981.

Merrill, Glen K.; and Rexroad, Carl B.
Conodonts from the Middle Carboniferous of southern Illinois and the base of the Pennsylvanian System [abstr.]: in The Geological Society of America, North-Central Section 15th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 13, No. 6, p. 309, March 1981.

Millay, M. A. Studies of Paleozoic marattialeans; an evaluation of the genus Cyathotrachus (Watson) Mamay: Palaeontographica, Abteilung B: Palaeophytologie, Vol. 180, No. 4-6, p. 65-81 (incl. German sum.), illus. (incl. 7 plates), 37 ref., 1982.

Millay, Michael A.; and Eggert, Donald A. Idanothekion gen. n., a synangiate pollen organ with saccate pollen from the Middle Pennsylvanian of Illinois: American Journal of Botany, Vol. 57, No. 1, p. 50-61, illus., 37 ref., January 1970.

Miller, Norton G. see Jackson, Stephen T.

Mitchell, J. K. see Lembke, W. D.

Moore, D. E.; Summers, R.; and Byerlee, J. D. Strengths of clay and non-clay fault gouges at elevated temperatures and pressures: in Proceedings of the 24th U.S. symposium on rock mechanics; theory, experiment, practice (Mathewson, Christopher C., editor; et al.), Proceedings - Symposium on Rock Mechanics, Vol. 24, p. 489-500, illus. (incl. 1 table). 24 ref., 1983.

Moore, David W.; and Johnson, W. Hilton.
Stratigraphy of Woodfordian till and lake beds in Iroquois and neighboring counties, Illinois [abstr.]: in The Geological Society of America, North-Central Section 15th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 13, No. 6, p. 310, March 1981.

Morse, Walter J. see Kempton, John P.

Mostaghimi, Saied. Trickle irrigation; a study of moisture distribution in the soil profile: 139 p., Doctoral, 1982, Univ. of Illinois, Urbana, IL. available from: Univ. Microfilms.

Mulvaney, R. L.; and Kurtz, L. T. A new method for determination of /15_N-labeled nitrous oxide: Soil Science Society of America Journal, Vol. 46, No. 6, p. 1178-1184, illus. (incl. 3 tables), 24 ref., December 1982. Univ. Ill. Agric. Exp. Stn.; Proj. No. ILLU-15-0392.

Musgrove, D. D. see Schnoor, J. L.

Musser, Douglas see Stout, Glenn E.

Musterman, J. L. see Schnoor, J. L.

Nawrot, J. R.; Klimstra, W. D.; Jenkusky, S. M.; et al. Illinois State reclamation plan for abandoned mined lands; resource document: 254 p., illus. (incl. tables, sketch maps), June 1980. available from: Ill. Abandoned Mined Lands Reclam. Counc., Ill., United States.

Naymik, Thomas G. Modeling as a tool in monitoring well network design: in Proceedings of the Second national symposium on aquifer restoration and ground water monitoring (Nielsen, David M., editor), Natl. Water Well Assoc., Worthington, OH, United States, p. 151-155, illus. (incl. sketch maps), 5 ref., 1982.

Naymik, Thomas G.; and Sievers, Mark E.
Ground-water tracer experiment (i) at Sand
Ridge Forest, Illinois [abstr.]: in

International water well exhibition; abstracts of papers to be presented at the Ground-Water Technology Division's Education Session (Anonymous), Ground Water, Vol. 21, No. 4, p. 514-515, August 1983.

Nelson, Darrell W. see Boyd, Stephen A.

Nelson, Robert S. Woodfordian subcrop and intensity of glacial erosion in McLean County, Illinois [abstr.]: in Abstracts with programs; Geological Society of America North-Central Section 16th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 14, No. 5, p. 267, March 1982.

Nelson, Robert S. see also Kirchner, James G.

Nelson, W. J. see Cartwright, K.

Nelson, W. John see Danner, Stephen K.

Niccum, Dwight A. Prevention of shoreline erosion by physical and structural methods: in Proceedings of a Round table on reclaiming and managing lakes in Illinois (Stout, Glenn E., director), Document - Illinois Institute of Natural Resources, 81/06, p. 106-109, July 1981.

Nolde, Jack E.; and Younker, Jean L. Facies and the environments of deposition of the LaSalle Cyclothem in North-Central Illinois [abstr.]: in The Geological Society of America, North-Central Section 15th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 13, No. 6, p. 311, March 1981.

Norby, R. D.; and Atherton, Elwood. The Mississippian Valmeyeran-Chesterian series boundary [abstr.]: in The Geological Society of America, North-Central Section 15th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 13, No. 6, p. 311, March 1981.

Nosow, Edmund see Van den Berg, Jacob

Nuttli, Otto W.; and Dwyer, John J.

State-of-the-art for assessing earthquake hazards in the United States; Report 10,
Attenuation of high-frequency seismic waves in the central Mississippi Valley: Miscellaneous Paper S (Vicksburg), Vol. 73-1, No. 10, 75 p., illus. (incl. 12 tables), 14 ref., July 1978.

available from: U. S. Army Eng. Waterways Exp. Stn., Vicksburg, MS, United States.

Oberg, K. A. see Graf, J. B.

Okhravi, Rasool. Carbonate microfacies and depositional environments of the Joachim Dolomite (Middle Ordovician), Southeast Missouri and southern Illinois, U.S.A.: 151 p., Doctoral, 1983, Univ. of Illinois, Urbana, IL. available from: Univ. Microfilms.

- Olimpio, J. C. Argonne National Laboratory site: in U. S. Geological Survey research in radioactive waste disposal; fiscal year 1980 (Schneider, Robert; et al.), Open-File Report (United States Geological Survey. 1978), p. 98-99, 2 ref., 1982. (Rep. No. 82-0509) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Denver, CO, United States.
- Olimpio, J. C. Low-level radioactive-waste burial at the Palos Forest Preserve, Illinois; Part II, Geology and hydrology of the glacial drift as related to the migration of tritium: Open-File Report (United States Geological Survey, 1978), 57 p., illus. (incl. sects., sketch maps), 13 ref., 1982. (Rep. No. 82-0078) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Denver, CO, United States.
- Olimpio, J. C. Data for wells at the low-level radioactive-waste burial site in the Palos Forest Preserve, Illinois: Open-file Report (United States Geological Survey. 1978), 101 p., 3 tables, sketch maps, 2 ref., 1982. (Rep. No. 82-0692) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Denver, CO, United States.
- Olson, Robert D. see Changnon, Stanley A., Jr.
- Paratore, William see Silver, Marshall L.
- Patterson, G. L. Hydrologic effects of storing
 liquified sewage sludge on strip-mined land,
 Fulton County, Illinois: Water-Resources
 Investigations, 34 p., 1982. (Rep. No.
 82-4047) available from: U. S. Geol. Surv.,
 Open-File Serv. Sect., West. Distrib. Branch,
 Denver Fed. Cent., Lakewood, CO, United
 States.
- Patterson, G. L.; Fuentes, R. F.; and Toler, L. G. Hydrologic characteristics of surface-mined land reclaimed by sludge irrigation, Fulton County, Illinois: Water-Resources Investigations, 35 p., 1982. (Rep. No. PB-83-124 982) available from: NTIS, Springfield, VA, United States (WRI 82-16).
- Peczkis, Jan. Anastrophic deposition in the Silurian dolomites of the Chicago area: 117 p., 67 plates, site loc. map, Master's, 213 ref., 1981, Northeastern Illinois Univ., Chicago, IL.
- Peppers, Russel A. see Phillips, Tom L.
- Perry, E. C., Jr. A comparison of mississippi valley ore deposits with modern groundwater of northern Illinois [abstr.]: in Abstracts with programs; Geological Society of America North-Central Section 16th annual meeting (Anonymous), Abstracts with Programs Geological Society of America, Vol. 14, No. 5, p. 268, March 1982.
- Perry, Eugene C., Jr.; Grundl, T.; and Gilkeson, Robert H. H, O, and S isotopic study of the

- groundwater in the Cambrian-Ordovician aquifer system of northern Illinois: in Isotope studies of hydrologic processes; selected papers from a symposium (Perry, Eugene C., Ur., editor; et al.), North. Ill. Univ. Press, De Kalb, IL, United States, p. 35-43, illus. (incl. 2 tables, strat. col., sketch maps), 23 ref., 1982.
- Perry, Eugene C., Jr. see also Gilkeson, Robert H.
- Peters, J. S. see Leisman, G. A.
- Peters, John S. see Leisman, Gilbert A.
- Philip, P. see Rullkotter, Jurgen
- Phillips, Tom L.; Peppers, Russel A.; Avin, Matthew J.; et al. Pennsylvanian coal swamp floras in the Illinois Basin [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at the University of Minnesota (Heimsch, Charles, president), American Journal of Botany, Vol. 59, No. 6, Part 2, p. 662, July 1972.
- Phillips, Tom L.; and Rosso, Samuel W. Spores of Botryopteris globosa and B. americana from the Pennsylvanian: American Journal of Botany, Vol. 57, No. 5, p. 543-551, illus. (incl. 2 tables), 25 ref., June 1970.
- Phillips, Tom L. see also Stidd, Benton M.
- Pigg, Kathleen B.; and Rothwell, Gar W. Chaloneria gen. nov.; heterosporous lycophytes from the Pennsylvanian of North America: Botanical Gazette (Chicago), Vol. 144, No. 1, p. i32-147, illus., 39 ref., March 1983.
- Pranschke, Frank A. Stratigraphy of Lake Michigán Formation in Lake Michigan's Southern Basin: Master's, 1980, Northeastern Illinois Univ., Chicago, IL.
- Prodan, P. F. see Shubert, J. P.
- Redborg, K. E. see Hinesly, T. D.
- Reed, Monty. Galatia; mammoth mine takes shape: Kerr-McGee Resources, Vol. 4, No. 2, p. 2-9, illus., 1982.
- Reed, Philip C. see Reinertsen, David L.
- Reinbold, Mark L. see Cluff, Robert M.
- Reinertsen, David L.; Masters, John M.; and Reed, Philip C. A guide to the geology of the Cairo area: Guide Leaflet - Illinois State Geological Survey, 1981 A. 32 p., illus. (incl. geol. sketch maps), 30 ref., April 25, 1981.
- Rexroad; Carl B. see Merrill, Glen K.
- Richardson, Eugene S., Jr. Problematica of Mazon Creek (Pennsylvanian, Westphalian D.

- Illinois) [abstr.]: in North American paleontological convention III; abstracts of papers (Anonymous), Journal of Paleontology, Vol. 56, Suppl. to No. 2., p. 22, March 1982. (Part II of III).
- Richardson, Eugene S., Jr. see also McGhee, George R., Jr.
- Rimmer, Susan M.; and Eberl, Dennis D. Origin of an underclay as revealed by vertical variations in mineralogy and chemistry: Clays and Clay Minerals, Vol. 30, No. 6, p. 422-430 (incl. German, Russian, French sum.), illus. (incl. 1 table), 26 ref., December 1982.
- Ritchey, Joseph D.; and Schicht, Richard J.
 Ground-water management in the American
 Bottoms, Illinois: in Proceedings of the
 Sixth national ground-water quality symposium;
 State, county, regional, and municipal
 jurisdiction of ground-water protection
 (Nielsen, David M., editor; et al.),
 Proceedings of the National Ground-Water
 Quality Symposium, Vol. 6, p. 279-286, illus.
 (incl. sect., sketch maps), 8 ref., 1983.
- Robare, Philip see Bhagwat, Subhash
- Roberts, Wyndham J. see Changnon, Stanley A., Jr.
- Robison, C. P. see Schnoor, J. L.
- Rockaway, John D. see Speck, Robert C.
- -- see Stephenson, R. W.
- Rogers, Kenneth. Illinois Environmental Protection Agency: in Proceedings, Illinois water-data users meeting (Toler, L. G., compiler), Open-file Report (United States Geological Survey, 1978), p. 5-9, 1982. (Rep. No. 82-1001) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Denver Fed. Cent., Lakewood, CO, United States.
- Rolfe, W. D. Ian see Schram, Frederick R.
- Roscoe, B. A.; and Hopke, P. K. Analysis of mineral phases in coal utilizing factor analysis: in Atomic and nuclear methods in fossil energy research; proceedings of the American Nuclear Society conference (Filby, Royston H., editor; et al.), Plenum Press, New York, NY, United States, p. 163-174, 6 tables, 16 ref., 1982.
- Rosholt, John N. Isotopic composition of uranium and thorium in crystalline rocks [abstr.]: in 1982 Archean geochemistry field conference; Seminoe Mountains and Hartville Uplift, Wyoming; Part II, Program (Goldich, Samuel S., chairperson), IGCP, Archean Geochem. Proj., U. S. Working Group, United States, Colo. Sch. Mines, United States, Geol. Surv., United States, p. 16, 1982.

- Rosso, Samuel W. see Phillips, Tom L.
- Rothwell, G. W.; and Eggert, D. A. A Conostoma with a tentacular integument from the Pennsylvanian of Illinois [abstr.]: in Program with abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups (Canright, James E., chairperson), American Journal of Botany, Vol. 57, No. 6, Part 2, p. 758, July 1970. Meetings of the Botanical Society of America and certain affiliated groups.
- Rothwell, Gar W. Ontogeny of the Paleozoic ovule, Callospermarion pusillum: American Journal of Botany, Vol. 58, No. 8, p. 706-715, illus. (incl. i table), 37 ref., September 1971.
- Rothwell, Gar W. Structure and affinities of the Paleozoic pollen organ, Idanothekion [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at the University of Minnesota (Heimsch, Charles, president), American Journal of Botany, Vol. 59, No. 6, Part 2, p. 662, July 1972.
- Rothwell, Gar W. Studies of Callistophyton-like Paleozoic pteridosperms [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at the University of Minnesota (Heimsch, Charles, president), American Journal of Botany, Vol. 59, No. 6, Part 2, p. 662-663, July 1972.
- Rothwell, Gar W. Pollen organs of the Pennsylvanian Callistophytaceae (Pteridospermopsida): American Journal of Botany, Vol. 59, No. 10, p. 993-999, illus., 20 ref., December 1972.
- Rothwell, Gar W.; and Taylor, T. N. Additional observations on the pteridosperm Schopfiastrum [abstr.]: in Abstracts of papers to be presented at the Interdisciplinary meeting of the Canadian Botanical Association and the Botanical Society of America at the University of Alberta (Starr, Richard C., president), American Journal of Botany, Vol. 58, No. 5, Part 2, p. 472, June 1971.
- Rothwell, Gar W.; and Whiteside, K. L. The structure of medullosan rooting systems [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at the University of Minnesota (Heimsch, Charles, president), American Journal of Botany, Vol. 59, No. 6, Part 2, p. 663, July 1972.
- Rothwell, Gar W. see also Pigg, Kathleen B.
- Roy, Stephen D.; and Vanderpool, N. Luanne.
 Simulation model of Lake Michigan bluff
 erosion [abstr.]: in Abstracts with programs:

- Geological Society of America North-Central Section 16th annual meeting (Anonymous), Abstracts with Programs Geological Society of America, Vol. 14, No. 5, p. 286, March 1982.
- Ruch, R. R. see Cahill, R. A.
- Rullkotter, Jurgen; and Philip, P. Extended hopanes up to C/40_ in Thornton bitumen: Nature (London), Vol. 292, No. 5824, p. 616-618, 13 ref., August 19, 1981.
- Russ, David P. Structural framework and tectonic evolution of the New Madrid seismic zone, central United States [abstr.]: in Abstracts with programs; 1982 Northeastern and Southeastern combined section meetings (Wright, T. O.; et al.), Abstracts with Programs Geological Society of America, Vol. 14, No. 1-2, p. 79, February 1982. 17th annual meeting of the Northeastern Section and 31st annual meeting of the Southeastern Section of the Geological Society of America.
- Samson, Irma. Illinois mineral industry in 1979/1980 and review of preliminary mineral production data for 1981: Illinois Mineral Note, Vol. 86, 40 p., illus. (incl. 35 tables, sketch maps), March 1983.
- Sanderson, Ellis W. see Kirk, James R.
- -- see Visocky, Adrian P.
- Sarg, J. F. see McGovney, James E.
- Sasman, Robert T.; Benson, Curtis R.; Ludwigs,
 R. Scott; et al. Water-level trends, pumpage,
 and chemical quality in the
 Cambrian-Drdovician aquifer in Illinois,
 1971-1980: Circular Illinois State Water
 Survey, Vol. 154, 64 p., illus. (incl. 5
 tables, sketch maps), 19 ref., 1982.
- Sasman, Robert T. see also Kirk, James R.
- -- see also Visocky, Adrian P.
- Sato, C. see Schnoor, J. L.
- Sayre, W. W. see Schnoor, J. L.
- Schicht, R. J.; and Terstriep, M. L. Illinois
 State Water Survey: in Proceedings, Illinois
 water-data users meeting (Toler, L. G.,
 compiler), Open-File Report (United States
 Geological Survey, 1978), p. 10-15, 1982.
 (Rep. No. 82-1001) available from: U. S. Geol.
 Surv., Open-File Serv. Sect., West. Distrib.
 Branch, Denver Fed. Cent., Lakewood, CO,
 United States.
- Schicht, Richard J. see Ritchey, Joseph D.
- Schiff, Anshel J. Actions to improve the state-of-earthquake-preparedness in Indiana and Illinois: in Proceedings of Conference XVIII; a workshop on Continuing actions to reduce losses from earthquakes in the

- Mississippi Valley area (Gori, Paula L., editor; et al.), Open-File Report (United States Geological Survey. 1978), p. 23-26, 1983. (Rep. No. 83-0157) available from: U. S. Geol. Surv., Reston, VA, United States.
- Schnoor, J. L.; Giaquinta, A. R.; Musgrove, D. D.; et al. Suspended sediment modeling of dredge-disposal effluent in the GREAT-II study reach: IIHR Report, Vol. 228, 226 p., illus. (incl. tables), 32 ref., March 1980. available from: Iowa Inst. Hydraul. Res., Iowa City, ID, United States.
- Schnoor, J. L.; Giaquinta, A. R.; Sato, C.; et al. Refinement and verification of predictive models of suspended sediment dispersion and desorption of toxics from dredged sediments: IIHR Report, Vol. 249, 196 p., illus. (incl. tables, sketch maps), 5 ref., July 1982.
- Schnoor, J. L.; Musterman, J. L.; Fisher, R. A.; et al. Desorption of pollutants from Mississippi River sediments in the GREAT II study reach lab simulation study: IIHR Report, Vol. 234, 210 p., illus. (incl. 44 anal., geol. sketch maps), 40 ref., 198?. available from: Iowa Inst. Hydraul. Res., Iowa City, IO, United States.
- Schram, Frederick R.; and Rolfe, W. D. Ian. New euthycarcinoid arthropods from the Upper Pennsylvanian of France and Illinois: Journal of Paleontology, Vol. 56, No. 6, p. 1434-1450, illus. (incl. 2 tables, 5 plates), 22 ref., November 1982.
- Schwalb, H. R. Geologic-tectonic history of the area surrounding the northern end of the Mississippi Embayment: in Selected structural basins of the Midcontinent, USA (Proctor, Paul Dean, editor; et al.), UMR Journal, Vol. 3, p. 31-42, illus. (incl. sects., geol. sketch maps), 7 ref., December 1982...(V. H. McNutt Geology Geophysics Department Colloquium Series).
- Sexton, J. L. see Braile, L. W.
- Sexton, John L.; Braile, Lawrence W.; and Hinze, William J. Seismic reflection surveying in the Wabash River Valley [abstr.]: in Abstracts with programs; Geological Society of America North-Central Section 16th annual meeting (Anonymous), Abstracts with Programs Geological Society of America, Vol. 14, No. 5, p. 287, March 1982.
- Seyler, Beverly. Tidal deposition of Cypress, Ridenhower, and Bethel sandstones (Chesterian, Late Mississippian), La Salle anticlinal belt, Lawrence and Crawford counties, Illinois [abstr.]: in AAPG annual convention with divisions SEPM/EMD/DPA (Anonymous), AAPG Bulletin, Vol. 66, No. 5, p. 628, May 1982.
- Seyler, Beverly. Delta environments of the lower Chesterian (Mississippian) in southern Illinois: Ill. Geol. Soc., Robinson, IL, United States, Ill. State Geol. Surv.,

- Champaign, IL, United States, 34 p., illus. (incl. sects., geol. sketch maps), 1982. Field trip held on April 27, 1982.
- Shadle, G. L.; and Stidd, Benton M. The frond of Heterangium [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at the University of Minnesota (Heimsch, Charles, president), American Journal of Botany, Vol. 59, No. 6, Part 2, p. 663, July 1972.
- Shaver, Robert H.; and Sunderman, Jack A. Reef and interreef water depths on the Silurian Wabash Platform of northern Indiana [abstr.]: in 16th annual meeting; North-Central Section, Geological Society of America (Anonymous), Abstracts with Programs Geological Society of America, Vol. 14, No. 5, p. 287, March 1982.
- Sherrill, M. G. (investigator). Piezometers in deep test well in northeast Illinois [abstr.]: in Geological Survey research 1982, Geological Survey Professional Paper, Vol. 1375, p. 108, 1982 [1983].
- Shimp, Neil F. Pyroprocessing technology: The Journal of Coal Quality, Vol. 1, No. 2, p. 4-5, 1982.
- Shubert, J. P.; and Prodan, P. F. Ground-water seepage into ponds at a surface mine site in northeastern Illinois [abstr.]: in Proceedings of the Symposium on practical ground-water monitoring considerations for the mining industry (U. S., National Water Well Association), Ground Water Monitoring Review, Vol. 3, No. 1, p. 154, 1983.
- Siegel, D. I.; and Mandle, R. J. Geochemical evidence for Pleistocene glacial meltwater recharge to the Cambrian-Ordovician aquifer in the Northcentral United States [abstr.]: in Abstracts with programs; Geological Society of America North-Central Section 16th annual meeting (Anonymous), Abstracts with Programs Geological Society of America, Vol. 14, No. 5, p. 288, March 1982.
- Sievering, Herman; Dave, Mehul; Dolske, Donald A.; et al. An experimental study of lake loading by aerosol transport and dry deposition in the southern Lake Michigan Basin: 180 p., illus. (incl. 21 tables), 95 ref., July 1979. (Rep. No. EPA-905/4-79-016) available from: U. S. Environ. Prot. Agency, Great Lakes Natl. Prog. Off., Chicago, IL, United States. Final report for the period June 1976-July 1979.
- Sievers, Mark E. see Naymik, Thomas G.
- Silver, Marshall L.; Faillace, George A.; and Paratore, William. Intact and remolded dynamic stress-strain properties of well-graded cohesive soils: Memorias del Congreso Panamericano de Mecanica de Suelos e Ingenieria de Fundaciones = Proceedings of the

- Panamerican Conference on Soil Mechanics and Foundation Engineering, 5, Tomo II, p. 415-425 (incl.: Spanish sum.), illus. (incl. 1 table), 4 ref., 1975.
- Silverman, M. see Chugh, Yoginder P.
- Sinclair, Robert A. see Kothandaraman, V.
- Singh, Krishan P. Synthetic unit hydrograph parameters for Illinois [abstr.]: in American Geophysical Union; 7th annual Midwest meeting (Murthy, V. Rama, convener), Eos, Transactions, American Geophysical Union, Vol. 63, No. 33, p. 614, August 17, 1982.
- Skjei, R. E.; King, M. J.; and Stewart, D. H. Energy storage in aquifers: in Subsurface space; proceedings of the international symposium (Rockstore'80); Vol. 2 (Bergman, Magnus, editor), Pergamon, Oxford, United Kingdom, p. 721-729 (incl. French sum.), illus. (incl. 3 tables, sketch map, block diag.), 1981.
- Sleep, Norman H. The events of February 4, 1983, Michigan, Indiana, and Illinois: Earthquake Notes, Vol. 52, No. 4, p. 3-9, sketch map, 4 ref., December 1981.
- Sloss, L. L. Illinois Basin has deep gas and oil potential: World Oil, Vol. 170, No. 6, p. 95-97, illus. (incl. sketch maps), 4 ref., May 1970.
- Smith, Leigh. Intracratonic basins; erosional remnants, bulls-eyes and mantle sinks [abstr.]: in GAC-MAC; program with abstracts; joint annual meeting (Brisbin, W. C., chairperson), Program with Abstracts Geological Association of Canada, Vol. 7, p. 82, 1982.
- Sommers, Lee E. see Boyd, Stephen A.
- Speck, Robert C.; and Rockaway, John D. A potential method for predicting coal-mine floor heave [abstr.]: in AAPG Eastern Section meeting, in conjunction with New York State Geological Association meeting (Anonymous), AAPG Bulletin, Vol. 66, No. 8, p. 1175, August 1982.
- Stanley, Roderick G.; and Fraunfelter, George H. Trace fossils and environments of deposition of the Caseyville and Abbott formations (Lower Pennsylvanian) of southern Illinois [abstr.]: in The Geological Society of America, North-Central Section 15th annual meeting, Abstracts with Programs Geological Society of America, Vol. 13, No. 6, p. 317, March 1981.
- Stephenson, R. W.; and Rockaway, John D.
 Geotechnical evaluation of low strength strata beneath coal seam: in Weak rock; soft, fractured and weathered rock; Proceedings of the international symposium on weak rock; Vol. II (Akai, Koichi, editor; et al.), A.A.
 Balkema, Rotterdam, Netherlands, p. 891-895, 8

ref., 1981.

- Stevenson, David L. The potential of the Knox Dolomite in the Illinois Basin for petroleum production: in Proceedings of the technical sessions, Kentucky Oil and Gas Association, Forty-first annual meeting (Luther, Margaret K., editor), Special Publication Kentucky Geological Survey, Vol. 5, p. 1-6, 2 tables, strat. cols., sketch map, 6 ref., 1982.
- Stewart, D. H. see Skjei, R. E.
- Stidd, Benton M.; and Hall, John W. Callandrium callistophytoides, gen. et sp. nov., the probable pollen-bearing organ of the seed fern, Callistophyton: American Journal of Botany, Vol. 57, No. 4, p. 394-403, illus., 32 ref., April 1970.
- Stidd, Benton M.; and Hall, John W. The natural affinity of the Carboniferous seed, Callospermarion: American Journal of Botany, Vol. 57, No. 7, p. 827-836, illus. (incl. 1 table), 8 ref., August 1970.
- Stidd, Benton M.; and Phillips, Tom L.

 Vegetative anatomy of Schopfiastrum decussatum Andrews from the Middle Pennsylvanian of the Illinois Basin [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at the University of Minnesota (Heimsch, Charles, president), American Journal of Botany, Vol. 59, No. 6, Part 2, p. 664, July 1972.
- Stidd, Benton M.; and Phillips, Tom L. The vegetative anatomy of Schopfiastrum decussatum from the Middle Pennsylvanian of the Illinois Basin: American Journal of Botany, Vol. 60, No. 5, p. 463-474, illus., 19 ref., June 1973.
- Stidd, Benton M. see also Shadle, G. L.
- Stout, Glenn E.; Buhr, Richard; Deo, Susan R.; et al. The feasibility and benefits of reclaiming a man-made lake; a case study of Lake Paradise, Mattoon, Illinois: W.R.C. Research Report, Vol. 170, 39 p., illus. (incl. 11 tables), 16 ref., July 1982.
- Stout, Glenn E. (director). Proceedings of a Round table on reclaiming and managing lakes in Illinois: Oct. 10-11, 1980, Champaign, IL, United States. Document Illinois Institute of Natural Resources, 81/06, 205 p., illus. (incl. tables), July 1981. Individual papers within scope are cited separately.
- Striegl, R. G. (investigator). Effects of stormwater detention on water quality near Glen Ellyn, Illinois [abstr.]: in Geological Survey research 1982, Geological Survey Professional Paper, Vol. 1375, p. 102, 1982 [1983].
- Strimple, H. L. The Chesteran crinoid species Agassizocrinus dissimilis Weller: Journal of Paleontology, Vol. 56, No. 5, p. 1133-1137, 1

- plate, 8 ref., September 1982.
- Summers, R. see Moore, D. E.
- Sunderman, Jack A. see Shaver, Robert H.
- Sundmacker, Harvey. Controlling sediment by watershed management techniques: in Proceedings of a Round table on reclaiming and managing lakes in Illinois (Stout, Glenn E., director), Document Illinois Institute of Natural Resources, 81/06, p. 77-80, July 1981.
- Swanson, Earl R. see Guntermann, Karl L.
- Swenson, Melinda M. see Willard, Daniel E.
- Taylor, T. N. Studies of pteridosperm fructifications [abstr.]: in Program with abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups (Canright, James E., chairperson), American Journal of Botany, Vol. 57, No. 6, Part 2, p. 757, July 1970. Meetings of the Botanical Society of America and Certain affiliated groups.
- Taylor, T. N. see also Rothwell, Gar W.
- Taylor, Thomas N. Lasiostrobus gen. n., a staminate strobilus of gymnospermous affinity from the Pennsylvanian of North America: American Journal of Botany, Vol. 56, No. 6, Part 1, p. 670-690, illus., 60 ref., July 1970.
- Taylor, Thomas N. Halletheca reticulatus gen. et sp. n.; a synangiate Pennsylvanian pteridosperm pollen organ: American Journal of Botany, Vol. 58, No. 4, p. 300-308, illus., 23 ref., April 1971.
- Taylor, Thomas N. A new Pennsylvanian fructification [abstr.]: in Abstracts of papers to be presented at the Interdisciplinary meeting of the Canadian Botanical Association and the Botanical Society of America at the University of Alberta (Starr, Richard C., president), American Journal of Botany, Vol. 58, No. 5, Part 2, p. 473, June 1971.
- Tepordei, Valentin V. Sand and gravel and crushed stone in the Midwest: *in* Proceedings of 18th forum on geology of industrial minerals; Theme: Construction materials (Ault, Curtis H., editor; *et al.*), Geological Survey Occasional Paper (Bloomington), Vol. 37, p. 173-181, illus. (incl. 2 tables), 11 ref., 1983.
- Terstriep, M. L. see Schicht, R. J.
- Thomas, Josephus, Jr.; and Frost, Robert R.
 Internal surface area and porosity in Eastern gas shales from the sorption of nitrogen, carbon dioxide, and methane; a status report: in Preprints, First Eastern gas shales symposium (Schott, Garry L., editor; et al.), U. S. Energy Res. Dev. Adm., Morgantown Energy

- Res. Cent., Morgantown, WV, United States, p. 431-437, illus. (incl. 4 tables), 11 ref., 1977.
- Thompson, Carolyn L. see Hatcher, Patrick G.
- Tichacek, Gregg. Illinois Department of Conservation: in Proceedings, Illinois water-data users meeting (Toler, L. G., compiler), Open-File Report (United States Geological Survey. 1978), p. 23-28, 1982. (Rep. No. 82-1001) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Denver Fed. Cent., Lakewood, CO, United States.
- Toler, L. G. Some chemical characteristics of mine drainage in Illinois: Geological Survey Water-Supply Paper (Washington), Vol. 2078, 47 p., illus. (incl. 5 tables, sketch maps), 8 ref., 1982. Supersedes Open-file report 80-416.
- Toler, L. G. (compiler). Proceedings, Illinois water-data users meeting: Feb. 28-24, 1982, Peoria, IL, United States. Open-File Report (United States Geological Survey. 1978), 93 p., sketch maps, 1982. (Rep. No. 82-1001) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Denver Fed. Cent., Lakewood, CO, United States. Individual agency status reports are cited separately; work group summaries are not.
- Toler, L. G. see also Patterson, G. L.
- Trapp, John S.; and Fenster, David F. Wrench faulting within the Illinois Basin; an hypothesis [abstr.]: in Abstracts with programs; Geological Society of America North-Central Section 16th annual meeting (Anonymous), Abstracts with Programs Geological Society of America, Vol. 14, No. 5, p. 290, March 1982.
- Treworgy, Colin G.; and Bargh, Margaret.

 Deep-minable coal resources of Illinois:
 Circular Illinois State Geological Survey,
 Vol. 527, 62 p., illus. (incl. tables, sketch
 maps; econ. geol. maps 1:1,574,800), 40 ref.,
 1982.
- Tuchman, Robert J. see Hill, James J.
- U. S. Geological Survey. Water resources data for Illinois, water year 1980; Volume 1, Illinois except Illinois River basin: 721 p., 1981. (Rep. No. PB-82 106 311) available from: NTIS, Springfield, VA, United States.
- U. S. Geological Survey. Water resources data for Illinois, water year 1980; Volume 2, Illinois River basin: 480 p., 1981. (Rep. No. PB-82 106 220) available from: NTIS, Springfield, VA, United States.
- U. S. Geological Survey. Land use and land cover and associated maps for Davenport, Iowa; Illinois: Open-File Report (United States Geological Survey. 1978), 3 sheets, land use

- maps 1:250,000, 1982. (Rep. No. 82-0012) available from: U. S. Geol. Surv., M1d-Continent Mapp. Cent., Rolla, M0, United States.
- U. S. Geological Survey. Land use and land cover and associated maps for Oubuque, Iowa; Illinois, Wisconsin: Open-File Report (United States Geological Survey. 1978), 2 sheets, land use map 1:250,000, 1982. (Rep. No. 82-0024) available from: U. S. Geol. Surv., Mid-Continent Mapp. Cent., Rolla, MO, United States.
- U. S. Geological Survey. Land use and land cover and associated maps for Racine, Michigan, Wisconsin, Illinois: Open-File Report (United States Geological Survey. 1978), 2 sheets, land use map 1:250,000, 1982. (Rep. No. 82-0229) available from: U. S. Geol. Surv., Mid-Continent Mapp. Cent., Rolla, MO, United States.
- U. S. Geological Survey. Land use and land cover and associated maps for Danville, Illinois; Indiana: Open-File Report (United States Geological Survey. 1978), 5 sheets, land use map 1:250,000, hydrol. map 1:250,000, 1982. (Rep. No. 82-0008) available from: U. S. Geol. Surv., East. Mapp. Cent., Reston, VA, United.States.
- U. S. Geological Survey. Land use and land cover and associated maps for Belleville, Illinois; Indiana: Open-File Report (United States Geological Survey. 1978), 2 sheets, land use map 1:250,000, 1982. (Rep. No. 82-0228) available from: U. S. Geol. Surv., Mid-Continent Mapp. Cent., Rolla, MO, United States.
- U. S. Geological Survey. Water resources data for Illinois, water year 1981; Volume 2, Illinois River basin: 547 p., 1982. (Rep. No. PB-83 119 974) available from: NTIS, Springfield, VA, United States.
- U. S. Geological Survey. Water resources data Illinois, water year 1981; Volume 1, Illinois except Illinois River basin: 683 p., 1982. (Rep. No. PB-83 119 966) available from: NTIS, Springfield, VA, United States.
- Vaiden, Robert; Cartwright, Keros; and Kempton, John P. A possible paleo-overpressured sand in glacial deposits of central Illinois [abstr.]: in Abstracts with programs; Geological Society of America North-Central Section 16th annual meeting (Anonymous), Abstracts with Programs Geological Society of America, Vol. 14, No. 5, p. 290, March 1982.
- Van den Berg, Jacob; Carpenter, G. L.; Nosow, Edmund; et al. 011 and gas developments in East-Central States in 1981: in World energy developments 1981 (Anonymous), AAPG Bulletin, Vol. 66, No. 11, p. 1887-1904, 10 tables, sketch maps, November 1982.

Van den Berg, Jacob; and Elyn, Jaclyn Rendall.
Petroleum industry in Illinois, 1981; Oil and
gas developments; Waterflood operations:
Illinois Petroleum, Vol. 124, 136 p., illus.
(incl. 14 tables, sketch map), 1983.

Van Schmus, W. R. see Bickford, M. E.

Vanderpool, N. Luanne see Roy, Stephen D.

Vaught, Tracy L. An assessment of the geothermal resources of Illinois based on existing geologic data: 41 p., illus. (incl. 2 tables, sketch maps), 27 ref., December 1980. (Rep. No. OOE/NV/10072-2) available from: NTIS, Springfield, VA, United States.

Vinzani, Peter G. see Changnon, Stanley A., Jr.

Visocky, Adrian P. Impact of Lake Michigan allocations on the Cambrian-Ordovician aquifer system: Ground Water, Vol. 20, No. 6, p. 668-674, 3 tables, sketch map, 15 ref., December 1982.

Visocky, Adrian P.; Sanderson, Ellis W.; Gibb, James P.; et al. Shades of immortality (where do we hang the plaque?); discussion and reply: Ground Water, Vol. 21, No. 1, p. 4-6, February 1983. For original article by Bennett, Truman, see Ground Water, 20(4), p. 390-392, 1982.

Visocky, Adrian P. see also Kempton, John P.

Votaw, Robert B.; and Kolata, Dennis.

Preliminary lithostratigraphy and biostratigraphy of the Maquoketa Group (Upper Ordovician), northern Illinois [abstr.]: in The Geological Society of America, North-Central Section 15th annual meeting, Abstracts with Programs - Geological Society of America, Vol. 13, No. 6, p. 320, March 1981.

Wallace, William L. see Haigh, Martin J.

Wang, Woodrow see Barcelona, Michael J.

Ward, P. E. Functions and activities of Office of Water Data Coordination: in Proceedings, Illinois water-data users meeting (Toler, L. G., compiler), Open-File Report (United States Geological Survey, 1978), p. 34-37, 1982. (Rep. No. 82-1001) available from: U. S. Geol. Surv., Open-File Serv. Sect., West. Distrib. Branch, Oenver Fed. Cent., Lakewood, CO, United States.

Weaverling, P. H. Facies transitions in Upper Cambrian strata of the Midcontinent region; tectonic implications [abstr.]: in Abstracts; Annual meeting of the Missouri Academy of Science, School of the Ozarks (Jones, John R., editor), Transactions of the Missouri Academy of Science, Vol. 16, p. 165, 1982.

Wehrmann, H. Allen. Nitrate contamination of ground water in the Roscoe area, Winnebago County, Illinois [abstr.]: in International

water well exhibition; abstracts of papers to be presented at the Ground-Water Technology Division's Education Session (Anonymous), Ground Water, Vol. 21, No. 4, p. 515, August 1983

Wei, Meng Hua; and McGinnis, L. D. Microgravity changes in the Mississippi Embayment [abstr.]: in Abstracts with programs; Geological Society of America North-Central Section 16th annual meeting (Anonymous), Abstracts with Programs - Geological Society of America, Vol. 14, No. 5, p. 292, March 1982.

Wenzel, H. G., Jr. see Goulter, I. C.

West, Douglas X. see Boyd, Stephen A.

West, Walter S. see Heyl, Allen V.

White, W. A. see Harvey, R. D.

-- see Hughes, R. E.

Whiteside, K. L. see Rothwell, Gar W.

Whiteside, Kirk L. Structural features of petrified cordaitean stems from North America [abstr.]: in Abstracts of papers to be presented at the Interdisciplinary meeting of the Canadian Botanical Association and the Botanical Society of America at the University of Alberta (Starr, Richard C., president), American Journal of Botany, Vol. 58, No. 5, Part 2, p. 473-474, June 1971.

Whiteside, Kirk L. Petrified cordaitean stems from the Middle Pennsylvanian of Illinois [abstr.]: in Abstracts of papers to be presented at the meetings of the Botanical Society of America and certain affiliated groups at the University of Minnesota (Heimsch, Charles, president), American Journal of Botany, Vol. 59, No. 6, Part 2, p. 664, July 1972.

Willard, Daniel E.; and Swenson, Melinda M. Why not my back yard?: in A Northeast conference; The impact of waste storage and disposal on ground-water resources (Novitzki, Richard P., editor; et al.), Cornell Univ. Cent. Environ. Res., Ithaca, NY, United States, U. S. Geol. Surv., Reston, VA, United States, p. 1.1.1-1.1.17, illus. (incl. sketch map), 13 ref., 1982.

Williams, Tamara L. see Sasman, Robert T.

Winkle, Candace J. The paleoenvironment of the Cedar Valley Limestone (Middle Oevonian) in northwestern Illinois: Master's, 1979, Univ. of Wisconsin, Milwaukee, WI.

Witzke, Brian J. see Bunker, Bill J.

Wong, B. D. C. see Eheart, J. W.

Woodland, B. G. see Baird, G. C.

Woodland, Bertram G. see Baird, Gordon C.

Younker, Jean L. see Hickey, David R.

-- see Nolde, Jack E.

Ziegler, E. L. see Hinesly, T. D.

Zietz, I. see Bickford, M. E.



BIBLIOGRAPHY AND INDEX OF ILLINOIS GEOLOGY

SUBJECT INDEX

```
absolute age see also
                                  Arthropoda--miscellanea
                                                                       petroleum engineering:
                                                                                                The
 geochronology; isotopes
                                    Pennsylvanian: New
                                                                         role of geology in
                                                                         reservoir simulation
absolute age--dates
                                       euthycarcinoid arthropods
 metamorphic rocks:
                                       from the Upper
                                                                         studies (Harris, D. G.)
                                       Pennsylvanian of France
    Interpretation of
                                                                       waterways: Refinement and
    Proterozoic basement in
                                                                         verification of predictive
                                       and Illinois (Schram,
    the Midcontinent
                                       Frederick R.)
                                                                          models of suspended
    (Bickford, M. E.)
                                  artifacts see archaeology
                                                                          sediment dispersion and
     Origin of middle
                                    under stratigraphy
                                                                         desorption of toxics from
   Proterozoic granitic and
                                   associations see also survey
                                                                         dredged sediments
    rhyolitic rocks in the
                                    organizations
                                                                          (Schnoor, J. L.)
                                   associations--environmental
    Midcontinent region of
                                                                     automatic data
   North America (Bickford,
                                    geology
                                                                       processing--geomorphology
    M. E.)
                                     Illinois Department of
                                                                       shore features: Simulation
  Paleosols: Geology and
                                       Conservation: Illinois
                                                                         model of Lake Michigan
                                                                         bluff erosion (Roy,
   paleopedology of the
                                       Department of Conservation
                                       (Tichacek, Gregg)
    Koster archeological site,
                                                                         Stephen D.)
    Greene County, Illinois
                                     Illinois Environmental
                                                                     barium--geochemistry
                                                                       ground water: Evaluation of
    (Hajic, Edwin R.)
                                       Protection Agency:
 peridotite: K-Ar ages of
                                       Illinois Environmental
                                                                         barium removal methods for
   phlogopite from mica
                                       Protection Agency (Rogers,
                                                                          groundwater supplies
    peridotite, Omaha oil
                                                                          (Krause, Terry L.)
                                       Kenneth)
    field intrusion, Gallatin
                                  associations--hydrogeology
                                                                           Isotopic and geologic
   County, southern Illinois
                                    Illinois Division of Water
                                                                         studies to identify the
    (Bikerman, Michael)
                                       Resources: Illinois
                                                                          sources of sulfate in
  sediments: Sedimentology
                                       Division of Water
                                                                          groundwater containing
    and Woodfordian history of
                                       Resources (Allison, Mel)
                                                                          high barium concentrations
                                                                          (Gilkeson, Robert H.)
    Lake Saline, southern
                                   atolls see reefs under
    Illinois (Heinrich, Paul
                                     sedimentary petrology; see
                                                                     beaches see under shore
    V.)
                                                                       features under geomorphology
                                    reefs under environment
Alberta--structural geology
                                    under sedimentation
                                                                     bentonite deposits see also
  tectonics: Intracratonic
                                   automatic data
                                                                       clays
                                    processing--engineering
                                                                     bibliography see also under
    basins; erosional
                                    geology
    remnants, bulls-eyes and
                                                                       economic geology
                                                                     biogeography--Brachiopoda.
    mantle sinks (Smith,
                                     earthquakes:
    Leigh)
                                       State-of-the-art for
                                                                       Devonian: Brachiopod
                                       assessing earthquake
                                                                         paleoecology,
ammonites see Mollusca
angiosperm flora see also
                                       hazards in the United
                                                                          paleobiogeography, and
                                       States; Report 10,
                                                                         biostratigraphy in the
 angiosperms
angiosperms--floral studies
                                       Attenuation of
                                                                          upper Middle Devonian of
                                       high-frequency seismic
  Cretaceous: Upper
                                                                          eastern North America; an
    Cretaceous of Illinois; a
                                       waves in the central
                                                                          ecofacies model for the
    preliminary survey
                                       Mississippi Valley
                                                                         Appalachian, Michigan, and
    (Matten, Lawrence C.)
                                       (Nuttli, Otto W.)
                                                                          Illinois basins (Koch,
archaeology see also under
                                     land subsidence:
                                                                          William F., II)
                                                                     biogeography--mollusks
                                       Application of remote
 stratigraphy
archeology see archaeology
                                                                       Pleistocene:
                                       sensing to subsidence
 under stratigraphy
                                                                          Woodfordian-Holocene
                                       detection at a
areal geology
                                       room-and-pillar coal mine
                                                                          mollusc biogeography of
  guidebook: A guide to the
                                       (Elifrits, C. Dale)
                                                                          Iowa and Illinois (Frest,
    geology of the Cairo area
                                    mining geology: Effect of
                                                                          T. J.)
    (Reinertsen, David L.)
                                       weak floor interaction on
                                                                     biologic evolution see under
                                       stability of coal pillars
                                                                       gymnosperms
                                       (Chugh, Y. P.)
                                                                     Bivalvia see under Mollusca
```

Blastoidea see under
Echinodermata
Brachiopoda--Articulata
Devonian: Brachiopod
paleoecology,
paleobiogeography, and
biostratigraphy in the
upper Middle Devonian of
eastern North America; an
ecofacies model for the
Appalachian, Michigan, and
Illinois basins (Koch,
William F., II)

Brachiopoda--faunal studies
Silurian: Fauna of the
Racine Dolomite
(Niagaran), Grafton,
Illinois (Garney, Ronald
T.)

brines see also under geochemistry burrows see ichnofossils

cadmium--geochemistry
 ground water: Retention of
 zinc, cadmium, copper, and
 lead by geologic materials
 (Gibb, James P.)

soils: Effect of soil
 cation exchange capacity
 on the uptake of cadmium
 by corn (Hinesly, T. D.)

California--geochemistry
isotopes: Isotopic
composition of uranium and

thorium in crystalline rocks (Rosholt, John N.) Cambrian see also under

stratigraphy; see also under stratigraphy under Midwest

Canada see also Alberta; Great Lakes; Great Lakes region carbonate rocks see under

sedimentary rocks

Carboniferous see also under geochronology; stratigraphy caves see under solution

features under geomorphology cement materials see

construction materials under economic geology;see construction materials under economic geology under Midwest

Cenozoic see also under stratigraphy

ceramic materials see also clays

ceramic materials--properties
 physical properties:
 Expansion and weathering

of brick (Hughes, R. E.)

changes of level see also

under stratigraphy;see also

under geomorphology under

Great Lakes region

chemical analysis see also
 spectroscopy; X-ray analysis

chemical analysis--methods

gas chromatography:
 Reservoir identification
 by chromatographic methods

(Dyer, Rolla McIntyre)
neutron activation analysis:
Application and comparison
of neutron activation
analysis with other
analytical methods for the
analysis of coal (Cahill,

R. A.)

clastic rocks see under

sedimentary rocks

clastic sediments see under sediments

clay mineralogy--areal studies
 Facies and the environments
 of deposition of the
 LaSalle Cyclothem in
 .North-Central Illinois
 (Nolde, Jack E.)

 Geochemical assessment of a sulfide-bearing coal waste deposit in

southwestern Illinois (Edkins, John E.)

origin of an underclay as revealed by vertical variations in mineralogy and chemistry (Rimmer, Susan M.)

clay mineralogy--experimental
 studies

bricks: Expansion and
 weathering of brick
 (Hughes, R. E.)

clays see also ceramic
 materials

clays--properties

physical properties: Expansion and weathering of brick (Hughes, R. E.)

climate, ancient see
 paleoclimatology

coal see also under economic
 geology;see also under
 organic residues under
 sedimentary rocks

coal--genesis

metamorphism: Regional zonal distribution of ore formation and coal metamorphism (Matveyev, A. K.)

coal--geochemistry

chemical analysis:
Application and comparison
of neutron activation
analysis with other
analytical methods for the
analysis of coal (Cahill,
R. A.)

coal--production

mining geology: Prediction of geologic anomalies in advance of mining; three case studies (Danner, Stephen K.) -- Preliminary
investigations for
underground coal mines
(Chugh, Yoginder P.)

(Chugh, Yoginder P.)
concretions see under
secondary structures under
sedimentary structures

conglomerate see also under
 clastic rocks under
 sedimentary rocks

congresses see symposia Conodonta--occurrence

Mississippian: Multielement conodont species from the Osagean (Lower Carboniferous) in Midcontinent North America and Texas (Chauff, K. M.)

conodonts--biostratigraphy

Carboniferous: Conodonts from the Middle Carboniferous of southern Illinois and the base of the Pennsylvanian System (Merrill, Glen K.) Ordovician: Preliminary

Ordovician: Preliminary lithostratigraphy and biostratigraphy of the Maquoketa Group (Upper Ordovician), northern Illinois (Votaw, Robert B.)

conservation see also under
environmental geology

conservation--natural resources

water resources: Water
 rights for humid regions
 (Eheart, J. W.)

construction materials see
also under economic
geology;see also under
economic geology under
Midwest

construction

materials--properties

physical properties:

Expansion and weathering
of brick (Hughes, R. E.)

copper--geochemistry
 ground water: Rete

ground water: Retention of zinc, cadmium, copper, and lead by geologic materials (Gibb, James P.)

soils: Copper (II) binding
by humic acid extracted
from sewage sludge; an
electron spin resonance
study (Boyd, Stephen A.)

Crinoidea see under Echinodermata

crust see also under
 seismology;see also under
 seismology under Midwest

dams see also under
 engineering geology;see also
 under engineering geology
 under Midwest

dams--design geologic hazards: Overtopping risk evaluation for an existing dam (Cheng, Shui-Tuang) deformation--experimental studies microcracks: Velocity behavior of rocks related to microcracks, micropores, and pore-fillings (Kowallis, Bart Joseph) deformation--field studies fault zones: Recurrent mid to late Paleozoic deformation along the Plum River fault zone (PRFZ), upper Mississippi Valley, USA (Bunker, Bill J.) deposition see under sedimentation deposition of ores see mineral deposits, genesis deuterium see also hydrogen; tritium deuterium--geochemistry ground water: Geochemical evidence for Pleistocene glacial meltwater recharge to the Cambrian-Ordovician aquifer in the Northcentral United States (Siegel, O. I.) Devonian see also under stratigraphy diagenesis see also sedimentation diagenesis--cementation calcite: Depositional environments and diagenesis of Salem Limestone (Middle Mississippian) reservoirs in southern Illinois (Cluff, Robert M.) diagenesis--materials carbonate rocks: Carbonate microfacies of the Platteville Group (Middle Ordovician), Lee and Lasalle counties, Illinois (Kuhnhenn, Gary Lee) diagenesis--processes coalification: Pennsylvanian coalfield rhizomorphs in Illinois evidence for non-compressive coalification to bituminous coal rank (Baird, Gordon C.) Pennsylvanian coalified rhizomorphs in Illinois; evidence for non-compressive coalification to bituminous coal rank (Baird, G. C.)

leaching: Origin of an underclay as revealed by vertical variations in mineralogy and chemistry (Rimmer, Susan M.) diamonds see also gems dolostone see also under carbonate rocks under sedimentary rocks drainage patterns see under fluvial features under geomorphology drift see under glacial features under glacial geology earthquakes see under seismology; see also engineering geology; seismology; see also under engineering geology under automatic data processing; Mississippi Valley; see also under seismology under Midwest Echinodermata see also echinoderms Echinodermata--Blastoidea Mississippian: A new hydrospire wall structure in the blastoid Pentremites (Beaver, Harold H.) Echinodermata--Crinoidea Mississippian: The Chesteran crinoid species Agassizocrinus dissimilis Weller (Strimple, H. L.) echinoderms see also Echinodermata echinoderms--biostratigraphy Mississippian: The Mississippian Valmeyeran-Chesterian series boundary (Norby, R. 0.) economic geology bibliography: A presentation and evaluation of the hydrologic information available for the major federal coal lands in seven Eastern States; sources of available information and a plan for future work (Grason, David)

David)

coal: A presentation and evaluation of the hydrologic information available for the major federal coal lands in seven Eastern States; sources of available information and a plan for future work (Grason, David)

-- Analysis of mineral phases in coal utilizing factor analysis (Roscoe,

B. A.) -- Cost of underground coal mining in Illinois (Bhagwat, Subhash) Deep-minable coal resources of Illinois (Treworgy, Colin G.) Murphysboro coal, Jackson and Perry counties; resources with low to medium sulfur potential (Jacobson, Russell J.) Pyroprocessing technology (Shimp, Neil F.) The Galatia Channel, a Pennsylvanian channel complex in western Gibson County, Indiana (Eggert, D. L.) construction materials: Geology of aggregate resources of Illinois (Goodwin, Jonathan H.) fuel resources: Exploration activity increases in Illinois Basin (Maslowski, Andy) Illinois Basin has deep gas and oil potential (Sloss, L. L.) Oil and gas developments in East-Central States in 1981 (Van den Berg, Jacob) geothermal energy: An assessment of the geothermal resources of Illinois based on existing geologic data (Vaught, Tracy L.) lead-zinc deposits: Outlying mineral occurrences related to the Upper Mississippi Valley mineral district, Wisconsin, Iowa, Illinois, and Minnesota (Heyl, Allen V.) maps: Dyersburg Quadrangle, Illinois, Kentucky, Missouri, and Tennessee (Gustavson, John B.) mineral resources: A comparison of mississippi valley ore deposits with modern groundwater of northern Illinois (Perry, E. C., Jr.)

review of preliminary
mineral production data
for 1981 (Samson, Irma)
-- The mineral industry of
Illinois (Hill, James J.)
molybdenum ores: Molybdenum
and other heavy metals of
the Mecca Quarry and Logan

Quarry shales (Coveney,

industry in 1979/1980 and

-- Illinois mineral

- Raymond M., Jr.)
- natural gas: A preliminary assessment of the natural gas potential of the New Albany Shale Group in Illinois (Cluff, Robert M.)
- -- Some results of Eastern Gas Shale Program of interest to Illinois Basin operators (Howard, James)
- oil and gas fields: Geology and geophysics of Spring Garden area, Jefferson County, Illinois (Caserotti, Phillip M.)
- -- Petroleum industry in Illinois, 1981; Dil and gas developments; Waterflood operations (Van den Berg, Jacob)
- -- Reservoir identification by chromatographic methods (Dyer, Rolla McIntyre)
- -- The application of remote sensing for the detection of Niagaran pinnacle reefs in the Illinois Basin (Lovely, Daniel A.)
- oil shale: Drganic-rich
 shale (Devonian and
 Mississippian) in the
 eastern interior United
 States (Kepferle, Roy C.)
- petroleum: Depositional
 environments and
 diagenesis of Salem
 Limestone (Middle
 Mississippian) reservoirs
 in southern Illinois
 (Cluff, Robert M.)
- -- The potential of the Knox Dolomite in the Illinois Basin for petroleum production (Stevenson, David L.)
- uranium ores: Dyersburg
 Quadrangle, Illinois,
 Kentucky, Missouri, and
 Tennessee (Gustavson, John
 B.)
- water resources: A
 presentation and
 evaluation of the
 hydrologic information
 available for the major
 federal coal lands in
 seven Eastern States;
 sources of available
 information and a plan for
 future work (Grason,
 David)
- -- Evaluation of barium removal methods for groundwater supplies (Krause, Terry L.)
- -- Functions and activities of Office of Water Data Coordination (Ward, P. E.)

- -- Ground-water management in the American Bottoms, Illinois (Ritchey, Joseph D.)
- -- Illinois Department of Conservation (Tichacek, Gregg)
- -- Illinois Division of Water Resources (Allison, Mel)
- -- Illinois Environmental Protection Agency (Rogers, Kenneth)
- -- Illinois State
 Geological Survey (Brower,
 R. D.)
- -- Illinois State Water Survey (Schicht, R. J.)
- Proceedings, Illinois water-data users meeting (Toler, L. G.)
- -- Shades of immortality (where do we hang the plaque?); discussion and reply (Visocky, Adrian P.)
- -- The chemistry of reduced sulfur species and their removal from groundwater supplies (Dohnalek, David A.)
- -- U. S. Geological Survey (Balding, G. O.)
- -- Water resources data for Illinois, water year 1980; Volume 1, Illinois except Illinois River basin (U. S. Geological Survey)
- -- Water resources data for Illinois, water year 1980; Volume 2, Illinois River basin (U. S. Geological Survey)
- -- Water resources data for Illinois, water year 1981; Volume 2, Illinois River basin (U. S. Geological Survey)
- -- Water resources data
 Illinois, water year 1981;
 Volume 1, Illinois except
 Illinois River basin (U.
 S. Geological Survey)
- -- Water withdrawals in Illinois, 1980 (Kirk, James R.)
- electrical surveys see under geophysical surveys
- electron microscopy see also
 chemical analysis;
 spectroscopy; X-ray analysis
- engineering geology see also
 deformation; environmental
 geology; ground water;
 mining geology; rock
 mechanics; soil mechanics
- engineering geology
 dams: Intact and remolded
 dynamic stress-strain
 properties of well-graded
 cohesive soils (Silver,

- Marshall L.)
 -- Synthetic unit
 hydrograph parameters for
 Illinois (Singh, Krishan
 P.)
- earthquakes: Actions to
 improve the
 state-of-earthquake-preparedness in Indiana and
 Illinois (Schiff, Anshel
 J.)
- -- Comments on earthquake hazards to dams in the New Madrid area (Krinitzsky, Ellis L.)
- -- State-of-the-art for assessing earthquake hazards in the United States; Report 10, Attenuation of high-frequency seismic waves in the central Mississippi Valley (Nuttli, Dtto W.)
- geologic hazards: Actions
 to improve the
 state-of-earthquake-preparedness in Indiana and
 Illinois (Schiff, Anshel
 J.)
- -- Geologic controls on mine subsidence in Illinois (Bradford, Susan C.)
- land subsidence:
 Application of remote
 sensing to subsidence
 detection at a
 room-and-pillar coal mine
 (Elifrits, C. Dale)
- mining geology: Effect of
 weak floor interaction on
 stability of coal pillars
 (Chugh, Y. P.)
- petroleum engineering: An
 overview of micellar
 flooding (Davis, John A.)
- Pressure observations and water densities in aquifers and their relation to problems in gas storage (Bond, D. C.)
- -- The role of geology in reservoir simulation studies (Harris, D. G.)
- rock mechanics: Elastic
 properties of two coals
 (Ko, Hon-Yim)
- shorelines: Engineering geology and geomorphology of streambank erosion; Report 3, The application of waterborne geophysical techniques in fluvial environments (May, John R.)
- -- Field measurements of longshore currents on a barred beach (Allender, J. H.)

- -- Prevention of shoreline erosion by physical and structural methods (Niccum, Dwight A.)
- tunnels: Geology and deep tunnels in Chicago (Buschbach, T. C.)
- underground installations: Energy storage in aquifers (Skjei, R. E.)
- Galatia; mammoth mine takes shape (Reed, Monty)
- Geotechnical evaluation of low strength strata beneath coal seam (Stephenson, R. W.)
- waste disposal: Argonne National Laboratory site (Olimpio, J. C.)
- Data for wells at the low-level radioactive-waste burial site in the Palos Forest Preserve, Illinois (Dlimpio, J. C.)
- Erosion of strip mine dumps in La Salle County. Illinois; preliminary results (Haigh, Martin J.)
- Geochemical assessment of a sulfide-bearing coal waste deposit in southwestern Illinois (Edkins, John E.)
- Hydrologic effects of storing liquified sewage sludge on strip-mined land, Fulton County, Illinois (Patterson, G. L.)
- Low-level radioactive-waste burial at the Palos Forest Preserve, Illinois; Part II. Geology and hydrology of the glacial drift as related to the migration of tritium (Olimpio, J. C.)
- -- Retention of zinc, cadmium, copper, and lead by geologic materials (Gibb, James P.)
- Sheffield, Illinois (Foster, James B.)
- Suspended sediment modelina of dredge-disposal effluent in the GREAT-II study reach (Schnoor, J. L.)
- waterways: Analyzing floodplain policies using an interdependent land use allocation model (Goulter, I. C.)
- -- Refinement and verification of predictive models of suspended sediment dispersion and desorption of toxics from

dredged sediments (Schnoor, J. L.) engineering geology--petroleum

engineering

- gas storage: Pressure observations and water densities in aquifers and their relation to problems in gas storage (Bond, D. C.)
- recovery: Synergism in reservoir management; the geologic perspective (Harris, D. G.)
- reservoir rocks: The role of geology in reservoir simulation studies (Harris, D. G.)
- tertiary recovery: An overview of micellar flooding (Davis, John A.)
- environmental geology see also engineering geology environmental geology conservation: Illinois
 - Department of Conservation (Tichacek, Gregg)
 - Prevention of shoreline erosion by physical and structural methods (Niccum, Dwight A.)
 - geologic hazards: Synthetic unit hydrograph parameters for Illinois (Singh, Krishan P.)
 - land use: Land use and land cover and associated maps for Belleville, Illinois; Indiana (U. S. Geological Survey)
 - Land use and land cover and associated maps for Danville, Illinois; Indiana (U. S. Geological Survey)
 - Land use and land cover and associated maps for Davenport, Iowa; Illinois (U. S. Geological Survey)
 - Land use and land cover and associated maps for Dubuque, Iowa; Illinois, Wisconsin (U. S. Geological Survey)
 - -- Land use and land cover and associated maps for Racine, Michigan, Wisconsin, Illinois (U. S. Geological Survey)
 - maps: Land use and land cover and associated maps for Belleville, Illinois; Indiana (U. S. Geological Survey)
 - Land use and land cover and associated maps for Danville, Illinois; Indiana (U. S. Geological Survey)

- -- Land use and land cover and associated maps for Davenport, Iowa; Illinois (U. S. Geological Survey)
- Land use and land cover and associated maps for Dubuque, Iowa; Illinois, Wisconsin (U. S. Geological Survey)
- Land use and land cover and associated maps for Racine, Michigan, Wisconsin, Illinois (U. S. Geological Survey)
- pollution: An experimental study of lake loading by aerosol transport and dry deposition in the southern Lake Michigan Basin (Sievering, Herman)
- Desorption of pollutants from Mississippi River sediments in the GREAT II study reach lab simulation study (Schnoor, J. L.)
- Ground-water management in the American Bottoms, Illinois (Ritchey, Joseph D.)
- -- Illinois Environmental Protection Agency (Rogers, Kenneth)
- -- Nitrate contamination of ground water in the Roscoe area, Winnebago County, Illinois (Wehrmann, H. Allen)
- -- Retention of zinc, cadmium, copper, and lead by geologic materials (Gibb, James P.)
- Some chemical characteristics of mine drainage in Illinois (Toler, L. G.)
- reclamation: Hydrologic characteristics of surface-mined land reclaimed by sludge irrigation, Fulton County, Illinois (Patterson, G. L.)
- -- Illinois State reclamation plan for abandoned mined lands (Illinois Abandoned Mined Lands Reclamation Council)
- Illinois State reclamation plan for abandoned mined lands; resource document (Nawrot, J. R.)
- The feasibility and benefits of reclaiming a man-made lake; a case study of Lake Paradise, Mattoon, Illinois (Stout, Glenn E.)

erosion see under processes under geomorphology

eruptive rocks see igneous rocks experimental studies see under clay mineralogy; deformation; fractures faulting see faults faults--displacements transform faults: A three-plate model of the Midcontinent Gravity High (Dutch, Steven I.) wrench faults: Wrench faulting within the Illinois Basin; an hypothesis (Trapp, John \$.) faults--distribution seismic surveys: Seismic reflection surveying in the Wabash River Valley (Sexton, John L.) faults--effects gouge: Strengths of clay and non-clay fault gouges at elevated temperatures and pressures (Moore, D. E.) faults--systems block structures: Recurrent mid to late Paleozoic deformation along the Plum River fault zone (PRFZ), upper Mississippi Valley, USA (Bunker, Bill J.) ferns see also pteridophytes floods see under geologic hazards fluvial features see under geomorphology folds see also faults foraminifera--faunal studies Silurian: Fauna of the Racine Dolomite (Niagaran), Grafton, Illinois (Garney, Ronald foraminifers see also foraminifera fossils, problematic see problematic fossils foundations see also rock mechanics; soil mechanics fractures--experimental studies microcracks: Velocity behavior of rocks related to microcracks, micropores, and pore-fillings (Kowallis, Bart Joseph) fuel resources see also under economic geology gamma-ray methods see under radioactivity under well-logging gems--resources

collecting: Pyrite and

genesis of ore deposits see

fluorite (Jones, Bob)

mineral deposits, genesis

geochemistry adsorption: Internal surface area and porosity in Eastern gas shales from the sorption of nitrogen, carbon dioxide, and methane; a status report (Thomas, Josephus, Jr.) brines: A comparison of mississippi valley ore deposits with modern groundwater of northern Illinois (Perry, E. C., Ur.) ground water: Isotopic and geologic studies to identify the sources of sulfate in groundwater containing high barium concentrations (Gilkeson, Robert H.) isotopes: A preliminary report on /238 uranium series disequilibrium in groundwater of the / Cambrian-Ordovician aquifer system of northeastern Illinois (Gilkeson, Robert H.) -- H, O, and S isotopic study of the groundwater in the Cambrian-Ordovician aquifer system of northern Illinois (Perry, Eugene C., Jr.) -- Isotopic composition of uranium and thorium in crystalline rocks (Rosholt, John N.) organic materials: Extended hopanes up to C/40_ in Thornton bitumen (Rullkotter, Jurgen) Organic matter in a coal ball; peat or coal? (Hatcher, Patrick G.) trace elements: Application and comparison of neutron activation analysis with other analytical methods for the analysis of coal (Cahill, R. A.) Trace element geochemistry of Herrin (No. 6) Coal in the

Illinois Basin (Chou, Chen-Lin) geochemistry--processes
leaching: Origin of an underclay as revealed by vertical variations in mineralogy and chemistry (Rimmer, Susan M.) geochemistry--surveys

Dyersburg Quadrangle, Illinois, Kentucky, Missouri, and Tennessee (Gustavson, John B.)

geochronology see also absolute age

geochronology

structures

Carboniferous: K-Ar ages of phlogopite from mica peridotite, Omaha oil field intrusion, Gallatin County, southern Illinois (Bikerman, Michael) Permian: K-Ar ages of phlogopite from mica

County, southern Illinois (Bikerman, Michael) geodes see under secondary structures under sedimentary

peridotite, Omaha oil field intrusion, Gallatin -

geologic hazards see also under engineering geology; environmental geology; see also under engineering geology under Mississippi Valley

geologic hazards -- floods dams: Overtopping risk evaluation for an existing dam (Cheng, Shui-Tuang)

geologic hazards--prediction underground mining: A potential method for predicting coal-mine floor heave (Speck, Robert C.)

-- Prediction of geologic anomalies in advance of mining; three case studies (Danner, Stephen K.)

geologic time see absolute age; geochronology geomorphology see also glacial geology

geomorphology

glacial geology: A possible paleo-overpressured sand in glacial deposits of central Illinois (Vaiden, Robert)

-- Drainage evolution of the Bureau Creek basin, in central-northern Illinois (Eckert, Stephen M.)

Subglacial mixing processes and the matrix uniformity of basal tills of the Laurentide ice sheet in Iowa and Illinois, U.S.A. (Kemmis, T. J.)

-- Variability in the nature and types of glacial sedimentation within the Woodfordian Substage in Illinois (Johnson, W. Hilton)

processes: Erosion of strip mine dumps in La Salle County, Illinois; preliminary results (Haigh, Martin J.) shore features: Simulation

model of Lake Michigan bluff erosion (Roy,

solution features: Brainard Cave, Jersey County, Illinois (Frasz, Geoffrey) Twenty miles under Illinois; the land and the caves (Frasz, Geoffrey B.) geomorphology--fluvial features drainage patterns: Drainage evolution of the Bureau Creek basin, in central-northern Illinois (Eckert, Stephen M.) rivers: Sedimentology and geochemistry of backwater lakes on the Illinois River (Cahill, Richard A.) geomorphology--processes erosion: Erosion of strip mine dumps in La Salle County, Illinois; preliminary results (Haigh, Martin J.) geomorphology--shore features beaches: Field measurements of longshore currents on a barred beach (Allender, J. H.) cliffs: Simulation model of Lake Michigan bluff erosion (Roy, Stephen D.) landform evolution: Holocene and modern history of a beach ridge and dune plane, Lake Michigan (Collinson, Charles) geomorphology--solution features caves: Brainard Cave, Jersey County, Illinois (Frasz, Geoffrey) Twenty miles under Illinois; the land and the caves (Frasz, Geoffrey B.) geophysical surveys see under Midwest: Mississippi Valley; see electrical surveys under geophysical surveys; see gravity surveys under geophysical surveys; see gravity surveys under geophysical surveys under Midwest; Mississippi Valley; see seismic surveys under geophysical surveys; see surveys under geophysical surveys geophysical surveys electrical surveys: Electrical resistivity and soil studies at the Range archaeological site (11-S-47), St. Clair County, Illinois (Calengas, Peter L.) gravity surveys: Microgravity changes in

Stephen D.)

(Wei, Meng Hua) remote sensing: Application of remote sensing to subsidence detection at a room-and-pillar coal mine (Elifrits, C. Dale) -- Patterned ground in central Illinois; evidence for permafrost during the last glaciation (Johnson, W. Hilton) -- The application of remote sensing for the detection of Niagaran pinnacle reefs in the Illinois Basin (Lovely, Daniel A.) seismic surveys: Geology and geophysics of Spring Garden area, Jefferson County, Illinois (Caserotti, Phillip M.) Seismic reflection surveying in the Wabash River Valley (Sexton, John L.) surveys: Ancient rift complex and related seismicity in the northern Mississippi Embayment area (Braile, L. W.) geophysics see also deformation; engineering geo logy geotechnics see engineering geology geothermal energy see also under economic geology glacial geology see also geomorphology glacial geology--glacial features drift: Implications of stratigraphic studies to mapping regional distribution of drift aquifers in Illinois (Kempton, John P.) till: A possible paleo-overpressured sand in glacial deposits of central Illinois (Vaiden,

dynamic stress-strain
properties of well-graded
cohesive soils (Silver,
Marshall L.)
-- Statistical confirmation
of the field
discrimination of till
units with particular
reference to a local
Radnor section in Woodford
County, Illinois
(Kirchner, James G.)

Intact and remolded

Robert)

-- Subglacial mixing processes and the matrix uniformity of basal tills of the Laurentide ice

sheet in Iowa and Illinois, U.S.A. (Kemmis, T. J.)

-- Variability in the nature and types of glacial sedimentation within the Woodfordian Substage in Illinois (Johnson, W. Hilton)

glacial geology--glaciation
 deposition: Quaternary
 paleoenvironmental changes
 in Illinois (King, James
 E.)

effects: A preliminary report on /238_uranium series disequilibrium in groundwater of the Cambrian-Ordovician aquifer system of northeastern Illinois (Gilkeson, Robert H.)

-- Sedimentology and Woodfordian history of Lake Saline, southern Illinois (Heinrich, Paul V.)

-- Sedimentology of terrace deposits at bend area of Wabash River (Fraser, Gordon S.)

glacial erosion:
 Woodfordian subcrop and
 intensity of glacial
 erosion in McLean County,
 Illinois (Nelson, Robert
 S.)

glacial extent: Drainage
 evolution of the Bureau
 Creek basin, in
 central-northern Illinois
 (Eckert, Stephen M.)

-- Stratigraphy of Woodfordian till and lake beds in Iroquois and neighboring counties, Illinois (Moore, David W.)

meltwater: Geochemical
evidence for Pleistocene
glacial meltwater recharge
to the Cambrian-Ordovician
aquifer in the
Northcentral United States
(Siegel, D. I.)

postglacial environment:
Late- and postglacial
pollen studies from the
Zuehl farm site,
north-central Iowa and
Cattail Channel Bog,
northwestern Illinois
(Kim, H. K.)

glacial geology--periglacial features

patterned ground: Patterned ground in central Illinois; evidence for permafrost during the last glaciation (Johnson, W. Hilton)

the Mississippi Embayment

glaciation see under glacial
 geology

glass sand see ceramic materials

gravel deposits see also under
 economic geology under
 Midwest

gravity surveys see under
 geophysical surveys; see
 under geophysical surveys
 under Midwest; Mississippi
 Valley

Great Lakes--environmental geology

pollution: An experimental study of lake loading by aerosol transport and dry deposition in the southern Lake Michigan Basin (Sievering, Herman)

Great Lakes region--environmental

region--environmental geology

pollution: Data for wells at the low-level radioactive-waste burial site in the Palos Forest Preserve, Illinois (Olimpio, J. C.)

- Low-level radioactive-waste burial at the Palos Forest Preserve, Illinois; Part II, Geology and hydrology of the glacial drift as related to the migration of tritium (Olimpio, J. C.)

Great Lakes

region--geomorphology changes of level: Simulation model of Lake Michigan bluff erosion (Roy, Stephen D.)

Great Lakes

region--stratigraphy
Holocene: Holocene and
modern history of a beach
ridge and dune plane, Lake
Michigan (Collinson,
Charles)

ground water--surveys
A possible
paleo-overpressured sand

in glacial deposits of central Illinois (Vaiden, Robert)

-- A preliminary report on /238_uranium series disequilibrium in groundwater of the Cambrian-Ordovician aquifer system of northeastern Illinois

(Gilkeson, Robert H.)

-- A presentation and evaluation of the hydrologic information available for the major federal coal lands in seven Eastern States; sources of available information and a plan for future work (Grason, David)

-- Data for wells at the low-level radioactive-waste burial site in the Palos Forest Preserve, Illinois (Olimpio, J. C.)

-- Energy storage in aquifers (Skjei, R. E.)

-- Environmental aspects of ground water and surface water chemistry of the Carbondale Group of Indiana and Illinois (Krothe, Noel C.)

-- Evaluation of barium removal methods for groundwater supplies (Krause, Terry L.)

-- Geologic controls on mine subsidence in Illinois (Bradford, Susan C.)

-- Ground-water management in the American Bottoms, Illinois (Ritchey, Joseph D.)

-- Ground-water seepage into ponds at a surface mine site in northeastern Illinois (Shubert, J. P.)

-- Ground-water tracer experiment (1) at Sand Ridge Forest, Illinois (Naymik, Thomas G.)

-- H, O, and S isotopic study of the groundwater in the Cambrian-Ordovician aquifer system of northern Illinois (Perry, Eugene C., Jr.)

-- Hydrogeologic evaluation of sand and gravel aquifers for municipal groundwater supplies in East-central Illinois (Kempton, John P.)

-- Illinois State Water Survey (Schicht, R. J.)

-- Impact of Lake Michigan allocations on the Cambrian-Ordovician aquifer system (Visocky, Adrian P.)

-- Implications of stratigraphic studies to mapping regional distribution of drift aquifers in Illinois (Kempton, John P.)

-- Isotopic and geologic studies to identify the sources of sulfate in groundwater containing high barium concentrations (Gilkeson, Robert H.)

radioactive-waste burial at the Palos Forest Preserve, Illinois; Part II, Geology and hydrology of the glacial drift as related to the migration of tritium (Olimpio, J. C.)

-- Modeling as a tool in monitoring well network design (Naymik, Thomas G.)

-- Nitrate contamination of ground water in the Roscoe area, Winnebago County, Illinois (Wehrmann, H. Allen)

-- Piezometers in deep test well in northeast Illinois (Sherrill, M. G.)

-- Pore-water pressure in the roof of an underground coal mine in Illinois (Cartwright, K.)

-- Pressure observations and water densities in aquifers and their relation to problems in gas storage (Bond, D. C.)

-- Retention of zinc, cadmium, copper, and lead by geologic materials (Gibb, James P.)

-- Shades of immortality (where do we hang the plaque?); discussion and reply (Visocky, Adrian P.)

-- The chemistry of reduced sulfur species and their removal from groundwater supplies (Dohnalek, David A.)

-- Water-level trends, pumpage, and chemical quality in the Cambrian-Ordovician aquifer in Illinois, 1971-1980 (Sasman, Robert T.)

-- Water withdrawals in Illinois, 1980 (Kirk, James R.)

Midwest: Geochemical
evidence for Pleistocene
glacial meltwater recharge
to the Cambrian-Ordovician
aquifer in the
Northcentral United States
(Siegel, D. I.)

guidebook see under areal
 geology

gymnosperm flora see also gymnosperms

gymnosperms--biologic
 evolution

Pennsylvanian: Dntogeny of
 the Paleozoic ovule,
 Callospermarion pusillum
 (Rothwell, Gar W.)

gymnosperms--Cordaitales
 Pennsylvanian: Petrified
 cordaitean stems from the
 Middle Pennsylvanian of
 Illinois (Whiteside, Kirk
 L.)

-- Structural features of petrified cordaitean stems from North America (Whiteside, Kirk L.)

gymnosperms--floral studies

Pennsylvanian: A Conostoma
with a tentacular
integument from the
Pennsylvanian of Illinois
(Rothwell, G. W.)

-- A Pennsylvanian flora from Murphysboro, Illinois (Brack, Sheila D.)

-- Halletheca reticulatus gen. et sp. n.; a synangiate Pennsylvanian pteridosperm pollen organ (Taylor, Thomas N.)

-- Lasiostrobus gen. n., a staminate strobilus of gymnospermous affinity from the Pennsylvanian of North America (Taylor, Thomas N.)

-- The vegetative anatomy of Schopfiastrum decussatum from the Middle Pennsylvanian of the Illinois Basin (Stidd, Benton M.)

gymnosperms--morphology
 Pennsylvanian: A new
 petrified medullosan
 pollen organ (Dennis, R.

re- Rhetinotheca tetrasolenata gen. et sp. n., an Aulacotheca-like fructification (Leisman, G. A.)

-- Vegetative anatomy of Schopfiastrum decussatum Andrews from the Middle Pennsylvanian of the Illinois Basin (Stidd, Benton M.)

gymnosperms--Pteridospermae
 Pennsylvanian: Additional
 observations on the
 pteridosperm Schopfiastrum
 (Rothwell, Gar W.)

Holocene see also under stratigraphy under Great Lakes region

hydrocarbons see under organic
materials

hydrogen see also deuterium:
 tritium

hydrogen--isotopes

D/H: Geochemical evidence for Pleistocene glacial meltwater recharge to the Cambrian-Drodvician aquifer in the Northcentral United States (Siegel, D. I.)

-- H, D, and S isotopic study of the groundwater in the Cambrian-Drdovician aquifer system of northern Illinois (Perry, Eugene C., Jr.)

hydrogeology see also ground
water; hydrology

hydrogeology

ground water: A possible
 paleo-overpressured sand
 in glacial deposits of
 central Illinois (Vaiden,
 Robert)

-- Energy storage in aquifers (Skjei, R. E.) -- Environmental aspects of

/- Environmental aspects of ground water and surface water chemistry of the Carbondale Group of Indiana and Illinois (Krothe, Noel C.)

-- Geochemical evidence for Pleistocene glacial meltwater recharge to the Cambrian-Drdovician aquifer in the Northcentral United States (Siegel, D. I.)

-- Ground-water seepage into ponds at a surface mine site in northeastern Illinois (Shubert, J. P.)

-- Ground-water tracer experiment (1) at Sand Ridge Forest, Illinois (Naymik, Thomas G.)

-- Hydrogeologic evaluation of sand and gravel aquifers for municipal groundwater supplies in East-central Illinois (Kempton, John P.)

-- Impact of Lake Michigan allocations on the Cambrian-Drdovician aquifer system (Visocky, Adrian P.)

-- Implications of stratigraphic studies to mapping regional distribution of drift aquifers in Illinois (Kempton, John P.)

-- Modeling as a tool in monitoring well network design (Naymik, Thomas G.)

-- Piezometers in deep test well in northeast Illinois (Sherrill, M. G.)

-- Pore-water pressure in the roof of an underground

coal mine in Illinois
(Cartwright, K.)

-- Water-level trends, pumpage, and chemical quality in the Cambrian-Drdovician aquifer in Illinois, 1971-1980 (Sasman, Robert T.)

nydrology: Causes and implications of record windblown dust conditions during 1981 in Illinois (Changnon, Stanley A., Jr.)

-- Chemical characteristics of lake sediments (Barcelona, Michael J.)

-- Controlling sediment by watershed management techniques (Sundmacker, Harvey)

 Dredged sediment for agriculture; Lake Paradise (Lembke, W. D.)

-- Effects of stormwater detention on water quality near Glen Ellyn, Illinois (Striegl, R. G.)

-- Environmental aspects of ground water and surface water chemistry of the Carbondale Group of Indiana and Illinois (Krothe, Noel C.)

-- The off-site sediment damage function in selected Illinois watersheds (Guntermann, Karl L.)

-- The 1980-1981 drought in Illinois; causes, dimensions, and impacts (Changnon, Stanley A., Jr.)

-- Time of concentration and storage coefficient values for Illinois streams (Graf, J. B.)

-- Usefulness of sediment oxygen demand as a tool for impoundment management (Barcelona, Michael J.)

Water chemistry of the

Illinois Waterway
(Kothandaraman, V.)
hydrology see also ground
water: hydrogeology

hydrology--surveys
A presentation and
evaluation of the
hydrologic information
available for the major
federal coal lands in
seven Eastern States;
sources of available
information and a plan for
future work (Grason,
David)

- -- Analyzing floodplain policies using an interdependent land use allocation model (Goulter, I. C.)
- -- Causes and implications of record windblown dust conditions during 1981 in Illinois (Changnon, Stanley A., Jr.)
- -- Chemical characteristics of lake sediments (Barcelona, Michael J.)
- -- Controlling sediment by watershed management techniques (Sundmacker, Harvey)
- -- Dredged sediment for agriculture; Lake Paradise (Lembke, W. D.)
- -- Effects of stormwater detention on water quality near Glen Ellyn, Illinois (Striegl, R. G.)
- -- Environmental aspects of ground water and surface water chemistry of the Carbondale Group of Indiana and Illinois (Krothe, Noel C.)
- -- Geochemical assessment of a sulfide-bearing coal waste deposit in southwestern Illinois (Edkins, John E.)
- -- Hydrologic
 characteristics of
 surface-mined land
 reclaimed by sludge
 irrigation, Fulton County,
 Illinois (Patterson, G.
 L.)
- -- Hydrologic effects of storing liquified sewage sludge on strip-mined land, Fulton County, Illinois (Patterson, G. L.)
- -- Illinois State Water Survey (Schicht, R. J.)
- -- Prevention of shoreline erosion by physical and structural methods (Niccum, Dwight A.)
- -- Proceedings of a Round table on reclaiming and managing lakes in Illinois (Stout, Glenn E.)
- -- Some chemical characteristics of mine drainage in Illinois (Toler, L. G.)
- -- Synthetic unit hydrograph parameters for Illinois (Singh, Krishan P)
- -- The off-site sediment damage function in selected Illinois watersheds (Guntermann,

- Karl L.)
- -- The 1980-1981 drought in Illinois; causes, dimensions, and impacts (Changnon, Stanley A., Jr.)
- -- Time of concentration and storage coefficient values for Illinois streams (Graf, J. B.)
- -- Usefulness of sediment oxygen demand as a tool for impoundment management (Barcelona, Michael J.)
- -- Water resources data for Illinois, water year 1980; Volume 1, Illinois except Illinois River basin (U. S. Geological Survey)
- -- Water resources data
 Illinois, water year 1981;
 Volume 1, Illinois except
 Illinois River basin (U.
 S. Geological Survey)
- // Illinois River: Water
 / chemistry of the Illinois
 Waterway (Kothandaraman,
 V.)
- Illinois River basin: Water resources data for Illinois, water year 1980; Volume 2, Illinois River basin (U. S. Geological Survey)
- -- Water resources data for Illinois, water year 1981; Volume 2, Illinois River basin (U. S. Geological Survey)
- Lake Paradise: The feasibility and benefits of reclaiming a man-made lake; a case study of Lake Paradise, Mattoon, Illinois (Stout, Glenn E.)
- Mississippi River:
 Engineering geology and geomorphology of streambank erosion; Report 3, The application of waterborne geophysical techniques in fluvial environments (May, John R.)
- -- Refinement and
 verification of predictive
 models of suspended
 sediment dispersion and
 desorption of toxics from
 dredged sediments
 (Schnoor, J. L.)
- -- Sedimentology and bathymetry of Pool 26, Mississippi River (Goodwin, Jonathan H.)
- Missouri River: Engineering geology and geomorphology of streambank erosion; Report 3, The application of waterborne geophysical

- techniques in fluvial environments (May, John R.)
- Ohio River: Engineering geology and geomorphology of streambank erosion; Report 3, The application of waterborne geophysical techniques in fluvial environments (May, John R.)
- ice ages see glacial geology
 ichnofossils--paleoecology
 Mississippian: Trace
 fossils and environments
 of deposition of the Aux
 Vases Formation and the
 Joppa Member of the Ste.
 Genevieve Formation
 (Middle Mississippian) in
 - (Middle Mississippian) in southeastern Missouri and southern Illinois (McKay, R. H.) Pennsylvanian: Trace
 - fossils and environments of deposition of the Caseyville and Abbott formations (Lower Pennsylvanian) of southern Illinois (Stanley, Roderick G.)
- igneous rocks see also magmas;
 metamorphic rocks
- igneous rocks--genesis

 models: Origin of middle

 Proterozoic granitic and

 rhyolitic rocks in the

 Midcontinent region of

 North America (Bickford,

 M. E.)
- igneous rocks--geochemistry
 isotopes: Isotopic
 composition of uranium and
 thorium in crystalline
 rocks (Rosholt, John N.)
- igneous rocks--lamprophyres
 petrology: Petrology and
 mineralogy of the
 monticellite alnoite
 associated with the Omaha
 oil field, Gallatin
 County, Illinois (Lewis,
 Richard)
- igneous rocks--peridotites

 absolute age: K-Ar ages of
 phlogopite from mica
 peridotite, Omaha oil
 field intrusion, Gallatin
 County, southern Illinois
 (Bikerman, Michael)
- incertae sedis see problematic
 fossils
- industrial minerals see also
 ceramic materials
 intrusions see also igneous
- rocks; metamorphism

 Invertebrata see also
 Arthropoda; Brachiopoda;
 Echinodermata; foraminifera;
 ichnofossils; Mollusca;

Ostracoda; problematic fossils: Trilobita Invertebrata -- paleoecology Pennsylvanian: Paleontology and stratigraphy of the Mattoon Formation (Pennsylvanian), Coles County, Illinois (Bandy, William F., Jr.) invertebrates see also conodonts; echinoderms; mollusks: ostracods invertebrates -- biostratigraphy Devonian: A Detroit River (Middle Devonian) fauna from the subsurface of Illnois (Linsley, Robert M.) Mississippian: Macropaleontology of the uppermost Mississippian and basal Pennsylvanian strata in the southern part of the Illinois Basin (Jennings, James R.) Pennsylvanian: Paleontology and stratigraphy of the Mattoon Formation (Pennsylvanian), Coles County, Illinois (Bandy, William F., Jr.) isotope dating see absolute age isotopes see also absolute age; geochronology isotopes--abundance crystalline rocks: Isotopic composition of uranium and thorium in crystalline rocks (Rosholt, John N.) isotopes--ground water ratios: A preliminary report on /238_uranium series disequilibrium in groundwater of the Cambrian-Ordovician aquifer system of northeastern Illinois (Gilkeson, Robert H.) Geochemical evidence for Pleistocene glacial meltwater recharge to the Cambrian-Ordovician aquifer in the Northcentral United States (Siegel, O. I.) H, O, and S isotopic study of the groundwater in the Cambrian-Ordovician

aquifer system of northern

Illinois (Perry, Eugene

oxide (Mulvaney, R. L.)

N-15: A new method for

determination of /15 N-labeled nitrous

land use see also under environmental geology land use--management floodplains: Analyzing floodplain policies using an interdependent land use allocation model (Goulter, I. C.) lava see also igneous rocks; magmas lead--geochemistry ground water: Retention of zinc, cadmium, copper, and lead by geologic materials (Gibb, James P.) limestone see also under carbonate rocks under sedimentary rocks magmas see also igneous rocks magmas--evolution acidic composition: Origin of middle Proterozoic granitic and rhyolitic rocks in the Midcontinent region of North America (Bickford, M. E.) granitic composition: Interpretation of Proterozoic basement in the Midcontinent (Bickford, M. E.) maps see also under economic geology; environmental geology; soils mathematical geology see also automatic data processing meetings see symposia metal ores see also under economic geology under Midwest metal ores--genesis metamorphism: Regional zonal distribution of ore formation and coal metamorphism (Matveyev, A. K.) metals--geochemistry sediments: Sedimentology and geochemistry of backwater lakes on the Illinois River (Cahill, Richard A.) metamorphic rocks see also

rocks.

isotopes--oxygen metamorphic rocks--genesis 0-18/0-16: Isotopic and geologic studies to models: Interpretation of Proterozoic basement in identify the sources of the Midcontinent sulfate in groundwater (Bickford, M. E.) containing high barium metamorphic rocks--metaigneous concentrations (Gilkeson, Robert H.) genesis: Origin of middle kaolin deposits see also Proterozoic granitic and ceramic materials; clays rhyolitic rocks in the Lamellibranchiata see Bivalvia Midcontinent region of under Mollusca North America (Bickford, lamprophyres see under igneous M. E.) metamorphism see also metamorphic rocks metamorphism--regional metamorphism temperature: Regional zonal distribution of ore formation and coal metamorphism (Matveyev, A. K.) metasomatic rocks see also igneous rocks; metamorphic rocks; metamorphism metasomatism see also metamorphism methods see under chemical analysis; mineral exploration; mining geology; spectroscopy Midwest--economic geology construction materials: Sand and gravel and crushed stone in the Midwest (Tepordei, Valentin V.) gravel deposits: Sand and gravel and crushed stone in the Midwest (Tepordei, Valentin V.) metal ores: Molybdenum and other heavy metals of the Mecca Quarry and Logan Quarry shales (Coveney, Raymond M., Jr.)
natural gas: Some results of Eastern Gas Shale Program of interest to Illinois Basin operators (Howard, James) Midwest--engineering geology dams: Comments on earthquake hazards to dams in the New Madrid area (Krinitzsky, Ellis L.) Midwest--environmental geology pollution: Geochemical assessment of a sulfide-bearing coal waste deposit in southwestern Illinois (Edkins, John E.) Midwest--geochemistry trace elements: Molybdenum and other heavy metals of the Mecca Quarry and Logan Quarry shales (Coveney, igneous rocks; metamorphism Raymond M., Jr.)

C., Ur.)

isotopes--nitrogen

Midwest--geochronology

Proterozoic: Interpretation

of Proterozoic basement in

the Midcontinent

(Bickford, M. E.)

Midwest--geophysical surveys

gravity surveys: A three-plate model of the Midcontinent Gravity High (Dutch, Steven I.)

Midwest--paleobotany

gymnosperms: Structural features of petrified cordaitean stems from North America (Whiteside, Kirk L.)

palynomorphs: Spores of Botryopteris globosa and B. americana from the Pennsylvanian (Phillips, Tom L.)

pteridophytes: Chaloneria
 gen. nov.; heterosporous
 lycophytes from the
 Pennsylvanian of North
 America (Pigg, Kathleen
 B.)

Midwest--petrology

metamorphic rocks: Origin
of middle Proterozoic
granitic and rhyolitic
rocks in the Midcontinent
region of North America
(Bickford, M. E.)

Midwest--seismology

crust: Ancient rift complex
and related seismicity in
the northern Mississippi
Embayment area (Braile, L.
W.)

earthquakes: The events of
February 4, 1983,
Michigan, Indiana, and
Illinois (Sleep, Norman
H.)

Midwest--stratigraphy
Cambrian: Facies
transitions in Upper
Cambrian strata of the
Midcontinent region;
tectonic implications
(Weaverling, P. H.)
Quaternary: Patterned

ground in central
Illinois; evidence for
permafrost during the last
glaciation (Johnson, W.
Hilton)

Midwest--structural geology tectonics:

Geologic-tectonic history of the area surrounding the northern end of the Mississippi Embayment (Schwalb, H. R.)

Midwest--tectonophysics

plate tectonics: A

three-plate model of the

Midcontinent Gravity High

(Dutch, Steven I.)

-- Ancient rift complex and related seismicity in the northern Mississippi Embayment area (Braile, L. W.)

mineral deposits, genesis--controls

hydrogeological controls: A comparison of mississippi valley ore deposits with modern groundwater of northern Illinois (Perry, E. C., Jr.)

mineral exploration--methods
uranium ores: Dyersburg
Quadrangle, Illinois,
Kentucky, Missouri, and
Tennessee (Gustavson, John
B.)

mineral exploration--ore guides

Dutlying mineral occurrences related to the Upper Mississippi Valley mineral district, Wisconsin, Iowa, Illinois, and Minnesota (Heyl, Allen V.)

mineral prospecting see
mineral exploration
mineral resources see also
under economic geology
mining geology--evaluation
coal: Effect of weak floor
interaction on stability
of coal pillars (Chugh, Y.

P.)
mining geology--methods
monitoring: Ground-water
seepage into ponds at a
surface mine site in
northeastern Illinois
(Shubert, J. P.)

room-and-pillar method:
Application of remote
sensing to subsidence
detection at a
room-and-pillar coal mine
(Elifrits, C. Dale)

mining geology--production control

coal: A potential method
 for predicting coal-mine
 floor heave (Speck, Robert
 C.)

-- Prediction of geologic anomalies in advance of mining; three case studies (Danner, Stephen K.)

land subsidence: Geologic controls on mine subsidence in Illinois

(Bradford, Susan C.)
mining geology--technology
underground mining:

Preliminary investigations for underground coal mines (Chugh, Yoginder P.) miospores see under palynomorphs Mississippi Valley--economic

geology
lead-zinc deposits:
 Outlying mineral
 occurrences related to the
 Upper Mississippi Valley
 mineral district,
 Wisconsin, Iowa, Illinois,
 and Minnesota (Heyl, Allen)

V.) Mississippi

Valley--engineering geology
earthquakes: Estimation of
earthquake effects
associated with a great
earthquake in the New
Madrid seismic zone
(Hopper, M. G.)

-- State-of-the-art for assessing earthquake hazards in the United States; Report 10, Attenuation of high-frequency seismic waves in the central Mississippi Valley (Nuttli, Otto W.)

geologic hazards:
Estimation of earthquake
effects associated with a
great earthquake in the
New Madrid seismic zone
(Hopper, M. G.)

waterways: Refinement and verification of predictive models of suspended sediment dispersion and desorption of toxics from dredged sediments (Schnoor, J. L.)

Mississippi

Valley--geophysical surveys gravity surveys: Microgravity changes in the Mississippi Embayment (Wei, Meng Hua)

Mississippi Valley--structural geology

tectonics: Recurrent mid to late Paleozoic deformation along the Plum River fault zone (PRFZ), upper Mississippi Valley, USA (Bunker, Bill J.)

Mississippian see also under stratigraphy

Mollusca--Archaeogastropoda

Devonian: A Detroit River

(Middle Devonian) fauna

from the subsurface of

Illnois (Linsley, Robert

M.)

Mollusca--Bivalvia

Pennsylvanian:

Ecophenotypic variability in some Upper Pennsylvanian Myalindae (Hickey, David R.)

mollusks--biostratigraphy

Devonian: A Detroit River

(Middle Devonian) fauna

from the subsurface of

Illnois (Linsley, Robert

M.)

Pleistocene:

Pleistocene:
Woodfordian-Holocene
mollusc biogeography of
Iowa and Illinois (Frest,
T. J.)

molybdenum--abundance
black shale: Molybdenum and
other heavy metals of the
Mecca Quarry and Logan
Quarry shales (Coveney,
Raymond M., Jr.)

molybdenum ores see also under economic geology

museums see also associations; survey organizations

natural gas see also under
economic geology;see also
under economic geology under
Midwest

natural resources see under conservation

nitrogen--geochemistry

shale: Internal surface area and porosity in Eastern gas shales from the sorption of nitrogen, carbon dioxide, and methane: a status report (Thomas, Josephus, Jr.)

nitrogen--isotopes

N-15: A new method for determination of /15_N-labeled nitrous oxide (Mulvaney, R. L.)

North America see also Great Lakes; Great Lakes region oil and gas fields see also

under economic geology
oil shale see also under

economic geology

Ordovician see also under

stratigraphy

ore guides see under mineral
 exploration

organic materials--analysis
gas chromatography:
Reservoir identification

by chromatographic methods (Dyer, Rolla McIntyre)

organic materials--geochemistry

materials--geochemistry
petroleum: Reservoir
identification by
chromatographic methods
(Dyer, Rolla McIntyre)

shale: Some results of
Eastern Gas Shale Program
of interest to Illinois
Basin operators (Howard,
James)

organic

materials--hydrocarbons hopanes: Extended hopanes up to C/40_ in Thornton bitumen (Rullkotter, Jurgen)

methane: Internal surface area and porosity in Eastern gas shales from the sorption of nitrogen, carbon dioxide, and methane; a status report (Thomas, Josephus, Jr.)

Ostracoda see also ostracods Ostracoda--Beyrichicopina Devonian: A Detroit River

(Middle Devonian) fauna
from the subsurface of
Illnois (Linsley, Robert
M.)

ostracods see also Ostracoda ostracods--biostratigraphy Cenozoic: Stratigraphy of Lake Michigan Formation in Lake Michigan's Southern Basin (Pranschke, Frank

oxygen--isotopes

A.)

0-18/0-16: Geochemical evidence for Pleistocene glacial meltwater recharge to the Cambrian-Drdovician aquifer in the Northcentral United States (Siegel, D. I.)

-- H, O, and S isotopic study of the groundwater in the Cambrian-Ordovician aquifer system of northern Illinois (Perry, Eugene C., Jr.)

-- Isotopic and geologic studies to identify the sources of sulfate in groundwater containing high barium concentrations (Gilkeson, Robert H.)

paleobotany

angiosperms: Upper
 Cretaceous of Illinois; a
 preliminary survey
 (Matten, Lawrence C.)

gymnosperms: A Conostoma
with a tentacular
integument from the
Pennsylvanian of Illinois
(Rothwell, G. W.)

-- A new petrified medullosan pollen organ (Dennis, R. L.)

-- A Pennsylvanian flora from Murphysboro, Illinois (Brack, Sheila D.)

-- Additional observations on the pteridosperm Schopfiastrum (Rothwell, Gar W.)

-- Halletheca reticulatus gen. et sp. n.; a synangiate Pennsylvanian pteridosperm pollen organ (Taylor, Thomas N.)

 Lasiostrobus gen. n., a staminate strobilus of gymnospermous affinity from the Pennsylvanian of North America (Taylor, Thomas N.)

-- Ontogeny of the Paleozoic ovule, Callospermarion pusillum (Rothwell, Gar W.)

-- Petrified cordaitean stems from the Middle Pennsylvanian of Illinois (Whiteside, Kirk L.)

-- Rhetinotheca tetrasolenata gen. et sp. n., an Aulacotheca-like fructification (Leisman, G. A.)

The vegetative anatomy of Schopfiastrum decussatum from the Middle Pennsylvanian of the Illinois Basin (Stidd, Benton M.)

-- Vegetative anatomy of Schopfiastrum decussatum Andrews from the Middle Pennsylvanian of the Illinois Basin (Stidd, Benton M.)

palynomorphs: A new
 Pennsylvanian
 fructification (Taylor,
 Thomas N.)

-- Callandrium callistophytoides, gen. et sp. nov., the probable pollen-bearing organ of the seed fern, Callistophyton (Stidd, Benton M.)

-- Idanothekion gen. n., a synangiate pollen organ with saccate pollen from the Middle Pennsylvanian of Illinois (Millay, Michael A.)

-- Illustrations and comments concerning the type specimens of Calamospora, Florinites, and Raistrickia (Kosanke, Robert M.)

pteridophytes: A lycopod
from the Salem Limestone
(Mississippian) of
Illinois (Jennings, J. R.)

-- A new pteridosperm male fructification from the Middle Pennsylvanian of Illinois (Leisman, Gilbert A.)

-- Linopteris in American coal balls (Leisman, G. A.)

-- Pennsylvanian coal swamp floras in the Illinois Basin (Phillips, Tom L.)

-- Pollen organs of the Pennsylvanian Callistophytaceae (Pteridospermopsida) (Rothwell, Gar W.)

- -- Structure and affinities of the Paleozoic pollen organ, Idanothekion (Rothwell, Gar W.)
- -- Studies of calamitean cones; further diversity of sporangiophore position and organization (Good, Charles W.)
- -- Studies of Callistophyton-like Paleozoic pteridosperms (Rothwell, Gar W.)
- -- Studies of Paleozoic marattialeans; an evaluation of the genus Cyathotrachus (Watson) Mamay (Millay, M. A.)
- -- Studies of pteridosperm fructifications (Taylor, T. N.)
- -- Studies of Sphenophyllum shoots; species delimitation within the taxon Sphenophyllum (Good, Charles W.)
- -- The frond of Heterangium (Shadle, G. L.)
- -- The morphology of Stigmaria stellata Goeppert (Jennings, James R.)
- -- The natural affinity of the Carboniferous seed, Callospermarion (Stidd, Benton M.)
- -- The structure of medullosan rooting systems (Rothwell, Gar W.)
- paleoclimatology--Cenozoic
 Geology and paleopedology of
 the Koster archeological
 site, Greene County,
 Illinois (Hajic, Edwin
 Robert)
 - -- Stratigraphy of Lake
 Michigan Formation in Lake
 Michigan's Southern Basin
 (Pranschke, Frank A.)
- paleoclimatology--Holocene
 Geology and paleopedology of
 the Koster archeological
 site, Greene County,
 Illinois (Hajic, Edwin R.)
- paleoclimatology--Ordovician
 Carbonate microfacies and
 depositional environments
 of the Joachim Dolomite
 (Middle Ordovician),
 Southeast Missouri and
 southern Illinois, U.S.A.
 (Okhravi, Rasool)
- paleoclimatology--Pleistocene Quaternary
 - paleoenvironmental changes in Illinois (King, James E.)

- -- Variability in the nature and types of glacial sedimentation within the Woodfordian Substage in Illinois (Johnson, W. Hilton)
- paleoclimatology--Quaternary
 Late Quaternary vegetation
 of Illinois, USA (King,
 James E.)
 - -- Woodfordian-Holocene mollusc biogeography of Iowa and Illinois (Frest, T. J.)
- paleoecology--Brachiopoda

 Devonian: Brachiopod

 paleoecology,
 paleobiogeography, and
 biostratigraphy in the
 upper Middle Devonian of
 eastern North America; an
 ecofacies model for the
 Appalachian, Michigan, and
 Illinois basins (Koch,
 William F., II)
- páleoecology--conodonts
 Carboniferous: Conodonts
 from the Middle
 Carboniferous of southern
 Illinois and the base of
 the Pennsylvanian System
 (Merrill, Glen K.)
 paleoecology--ichnofossils
- mississippian: Trace
 fossils and environments
 of deposition of the Aux
 Vases Formation and the
 Joppa Member of the Ste.
 Genevieve Formation
 (Middle Mississippian) in
 southeastern Missouri and
 southern Illinois (McKay,
 R. H.)
- Pennsylvanian: Trace fossils and environments of deposition of the Caseyville and Abbott formations (Lower Pennsylvanian) of southern Illinois (Stanley, Roderick G.)
- paleoecology--Mollusca
 Pennsylvanian:
 Ecophenotypic variability
 in some Upper
 Pennsylvanian Myalindae
 (Hickey, David R.)
- paleoecology--Pleistocene
 Paleoecology of a fossil
 plant assemblage from a
 pre-Wisconsinan till in
 southern Illinois
 (Jackson, Stephen T.)
- paleogeography--Cambrian
 Facies transitions in Upper
 Cambrian strata of the
 Midcontinent region;
 tectonic implications
 (Weaverling, P. H.)

- paleogeography--Devonian
 A Detroit River (Middle
 Devonian) fauna from the
 subsurface of Illnois
 (Linsley, Robert M.)
- paleogeography--Pleistocene
 Late Wisconsinan history of
 the middle Wabash River
 valley (Bleuer, N. K.)
 paleontology
 - Arthropoda: New
 euthycarcinoid arthropods
 from the Upper
 Pennsylvanian of France
 and Illinois (Schram,
 Frederick R.)
 - Brachiopoda: Brachiopod paleoecology, paleobiogeography, and biostratigraphy in the upper Middle Devonian of eastern North America; an ecofacies model for the Appalachian, Michigan, and Illinois basins (Koch, William F., II)
 - Conodonta: Multielement conodont species from the Osagean (Lower Carboniferous) in Midcontinent North America and Texas (Chauff, K. M.)
 - Echinodermata: A new hydrospire wall structure in the blastoid Pentremites (Beaver, Harold H.)
 - -- The Chesteran crinoid species Agassizocrinus dissimilis Weller (Strimple, H. L.)
 - Invertebrata: Fauna of the
 Racine Dolomite
 (Niagaran), Grafton,
 Illinois (Garney, Ronald
 T.)
 - -- Paleontology and stratigraphy of the Mattoon Formation (Pennsylvanian), Coles County, Illinois (Bandy, William F., Jr.)
 - Mollusca: Ecophenotypic variability in some Upper Pennsylvanian Myalindae (Hickey, David R.)
 - problematic fossils: First occurrence of the problematical fossil Vetacapsula in North America (McGhee, George R., Jr.)
 - -- Problematica of Mazon Creek (Pennsylvanian, Westphalian D, Illinois) (Richardson, Eugene S., Jr.)

paleontology--practice collecting: Why I am interested in fossils (Allaway, Bill) Paleosols see under soils; see under dates under absolute age paleozoogeography see biogeography palynomorphs -- biostratigraphy Pennsylvanian: Paleontology and stratigraphy of the Mattoon Formation (Pennsylvanian), Coles County, Illinois (Bandy, William F., Jr.) palynomorphs--megaspores Pennsylvanian: Callandrium callistophytoides, gen. et sp. nov., the probable pollen-bearing organ of the seed fern, Callistophyton (Stidd, Benton M.) Idanothekion gen. n., a synangiate pollen organ with saccate pollen from the Middle Pennsylvanian of Illinois (Millay, Michael A.) palynomorphs--miospores Paleozoic: Illustrations and comments concerning the type specimens of Calamospora, Florinites, and Raistrickia (Kosanke, Robert M.) Pennsylvanian: A new Pennsylvanian fructification (Taylor, Thomas N.) Pollen organs of the Pennsylvanian Callistophytaceae (Pteridospermopsida) (Rothwell, Gar W.) Spores of Botryopteris globosa and B. americana from the Pennsylvanian (Phillips, Tom L.) Structure and affinities of the Paleozoic pollen organ, Idanothekion (Rothwell, Gar W.) Studies of Paleozoic marattialeans; an evaluation of the genus Cyathotrachus (Watson)

Mamay (Millay, M. A.)

paleoenvironmental changes

postglacial pollen studies

from the Zuehl farm site,

north-central Iowa and

Cattail Channel Bog,

(Kim, H. K.)

northwestern Illinois

in Illinois (King, James

Pleistocene: Quaternary

Quaternary: Late- and

-- Late Quaternary vegetation of Illinois. USA (King, James E.) Pelecypoda see Bivalvia under Mollusca Pennsylvanian see also under stratigraphy peridotites see under igneous rocks periglacial features see under glacial geology Permian see also under geochronology petroleum see also under economic geology petroleum--geochemistry organic materials: Reservoir identification by chromatographic methods (Dyer, Rolla McIntyre) petrology igneous rocks: Petrology and mineralogy of the monticellite alnoite associated with the Omaha oil field, Gallatin County, Illinois (Lewis, Richard) physical geography see geomorphology Plantae see also angiosperms; gymnosperms; ichnofossils; palynomorphs; problematic fossils; pteridophytes Plantae--biostratigraphy Mississippian: Macropaleontology of the uppermost Mississippian and basal Pennsylvanian strata in the southern part of the Illinois Basin (Jennings, James R.) plate tectonics see also under tectonophysics; see also under tectonophysics under Midwest Pleistocene see also under stratigraphy pollution see also under environmental geology; see also under environmental geology under Great Lakes; Great Lakes region; Midwest precious stones see gems problematic fossils--miscellanea Pennsylvanian: Problematica of Mazon Creek (Pennsylvanian, Westphalian D, Illinois) (Richardson, Eugene S., Jr.) problematic fossils--occurrence Pennsylvanian: First occurrence of the problematical fossil Vetacapsula in North

America (McGhee, George

R., Jr.)

Proterozoic see also under geochronology under Midwest pteridophytes--Filicopsida Pennsylvanian: Studies of Paleozoic marattialeans; an evaluation of the genus Cyathotrachus (Watson) Mamay (Millay, M. A.) pteridophytes--floral studies Carboniferous: The natural affinity of the Carboniferous seed, Callospermarion (Stidd, Benton M.) Pennsylvanian: A new pteridosperm male fructification from the Middle Pennsylvanian of Illinois (Leisman, Gilbert A.) Pollen organs of the Pennsylvanian Callistophytaceae (Pteridospermopsida) (Rothwell, Gar W.) Studies of pteridosperm fructifications (Taylor, T. N.) pteridophytes--Lycopsida Mississippian: A lycopod from the Salem Limestone (Mississippian) of Illinois (Jennings, J. R.) The morphology of Stigmaria stellata Goeppert (Jennings, James R.) Pennsylvanian: Chaloneria gen. nov.; heterosporous lycophytes from the Pennsylvanian of North America (Pigg, Kathleen B.) Pennsylvanian coal swamp floras in the Illinois Basin (Phillips, Tom L.) pteridophytes -- morphology Pennsylvanian: Structure and affinities of the Paleozoic pollen organ, Idanothekion (Rothwell, Gar W.) Studies of Callistophyton-like Paleozoic pteridosperms (Rothwell, Gar W.) The structure of medullosan rooting systems (Rothwell, Gar W.) pteridophytes--occurrence coal balls: Linopteris in American coal balls (Leisman, G. A.) pteridophytes--Psilopsida Carboniferous: The frond of Heterangium (Shadle, G. L.)

E.)

pteridophytes--Sphenopsida

Pennsylvanian: Studies of
calamitean cones; further
diversity of
sporangiophore position
and organization (Good,
Charles W.)

-- Studies of Sphenophyllum shoots; species delimitation within the taxon Sphenophyllum (Good, Charles W.)

Quaternary see also under stratigraphy;see also under stratigraphy under Midwest radioactive dating see

absolute age radiocarbon dating see absolute age

radium--isotopes

Ra-226: A preliminary

report on /238_uranium series disequilibrium in groundwater of the Cambrian-Ordovician aquifer system of northeastern Illinois (Gilkeson, Robert H.)

reclamation see also under environmental geology reefs see also under sedimentary petrology

remote sensing see also under geophysical surveys

reservoir rocks see under petroleum engineering under engineering geology

rivers see under fluvial features under geomorphology;see under sedimentation rates under sedimentation

rock mechanics see also soil mechanics

rock mechanics--deformation
 testing: Elastic properties
 of two coals (Ko, Hon-Yim)

of two coals (Ko, Hon-Yimrock mechanics--failures

underground mining:

Geotechnical evaluation of low strength strata beneath coal seam (Stephenson, R. W.)

rock mechanics--materials, properties

elastic properties:
 Velocity behavior of rocks
 related to microcracks,
 micropores, and
 pore-fillings (Kowallis,
 Bart Joseph)

strength: Effect of weak floor interaction on stability of coal pillars (Chugh, Y. P.)

-- Strengths of clay and non-clay fault gouges at elevated temperatures and pressures (Moore, D. E.) sandstone see also under
 clastic rocks under
 sedimentary rocks
sedimentary petrology

reefs: The application of remote sensing for the detection of Niagaran pinnacle reefs in the Illinois Basin (Lovely, Daniel A.)

sedimentary rocks:
Carbonate microfacies and depositional environments of the Joachim Dolomite (Middle Ordovician),
Southeast Missouri and southern Illinois, U.S.A. (Okhravi, Rasool)

Origin of an underclay as revealed by vertical variations in mineralogy and chemistry (Rimmer, Susan M.)

-- Pennsylvanian coalfield rhizomorphs in Illinois evidence for non-compressive coalification to bituminous coal rank (Baird, Gordon C.)

-- Pennsylvanian coalified rhizomorphs in Illinois; evidence for non-compressive coalification to bituminous coal rank (Baird, G. C.)

-- Petrology of New Albany Shale Group (Upper Devonian and Kinderhookian) in the Illinois Basin; a preliminary report (Harvey, R. D.)

-- Resedimented deposits and evolution of Thornton Reef (Niagaran), northeastern Illinois (McGovney, James E.)

-- SEM-EDX characterization of macerals in dull and impure coal layers, Herrin Coal, Illinois (Costanza, S. H.)

-- So-called limestone
"concretions" in
Pennsylvanian black
"shales"; carbonate oases
in Carboniferous
carbonaceous environments
(Merrill, Glen K.)

The paleoenvironment of the Cedar Valley Limestone (Middle Devonian) in northwestern Illinois (Winkle, Candace J.)

sedimentary structures: Erosional channels in the Herrin (No. 6) Coal at Old Ben No. 24 Mine, Franklin County, Illinois (DeMaris, Philip J.)

-- Warsaw geodes (Martin, Willard E.)

sedimentation: Anastrophic deposition in the Silurian dolomites of the Chicago area (Peczkis, Jan)

-- Paleoenvironment of the New Albany Shale Group (Devonian-Mississippian) of Illinois (Cluff, Robert M.)

-- Sedimentology and geochemistry of backwater lakes on the Illinois River (Cahill, Richard A.)

-- Sedimentology of terrace deposits at bend area of Wabash River (Fraser, Gordon S.)

sediments: Sedimentology and bathymetry of Pool 26, Mississippi River (Goodwin, Jonathan H.)

-- Stratigraphy of Lake
Michigan Formation in Lake
Michigan's Southern Basin
(Pranschke, Frank A.)

sedimentary rocks see also sedimentary structures; sedimentation; sediments sedimentary rocks--carbonate rocks

dolostone: Anastrophic
 deposition in the Silurian
 dolomites of the Chicago
 area (Peczkis, Jan)

environmental analysis:
Carbonate microfacies and depositional environments of the Joachim Dolomite (Middle Ordovician), Southeast Missouri and southern Illinois, U.S.A. (Okhravi, Rasool)

limestone: Depositional environments and diagenesis of Salem Limestone (Middle Mississippian) reservoirs in southern Illinois (Cluff, Robert M.)

-- The paleoenvironment of the Cedar Valley Limestone (Middle Devonian) in northwestern Illinois (Winkle, Candace J.)

lithofacies: Facies and the
environments of deposition
of the LaSalle Cyclothem
in North-Central Illinois
(Nolde, Jack E.)

lithostratigraphy:
Carbonate microfacies of
the Platteville Group
(Middle Ordovician), Lee
and Lasalle counties,
Illinois (Kuhnhenn, Gary
Lee)

sedimentary rocks--clastic rocks

- black shale: Molybdenum and
 other heavy metals of the
 Mecca Quarry and Logan
 Quarry shales (Coveney,
 Raymond M., Jr.)
 -- So-called limestone
- -- So-called limestone
 "concretions" in
 Pennsylvanian black
 "shales"; carbonate oases
 in Carboniferous
 carbonaceous environments
 (Merrill, Glen K.)
- conglomerate: Resedimented
 deposits and evolution of
 Thornton Reef (Niagaran),
 northeastern Illinois
 (McGovney, James E.)
- environmental analysis:
 Paleontology and
 stratigraphy of the
 Mattoon Formation
 (Pennsylvanian), Coles
 County, Illinois (Bandy,
 William F., Jr.)
- lithostratigraphy:
 Preliminary
 lithostratigraphy and
 biostratigraphy of the
 Maquoketa Group (Upper
 Ordovician), northern
 Illinois (Votaw, Robert
 B.)
- sandstone: The Galatia Channel, a Pennsylvanian channel complex in western Gibson County, Indiana (Eggert, D. L.)
- -- Tidal deposition of Cypress, Ridenhower, and Bethel sandstones (Chesterian, Late Mississippian), La Salle anticlinal belt, Lawrence and Crawford counties, Illinois (Seyler, Beverly)
- shale: Paleoenvironment of
 the New Albany Shale Group
 (Devonian-Mississippian)
 of Illinois (Cluff, Robert
 M.)
- -- Petrology of New Albany Shale Group (Upper Devonian and Kinderhookian) in the Illinois Basin; a preliminary report (Harvey, R. D.)
- underclay: Origin of an
 underclay as revealed by
 vertical variations in
 mineralogy and chemistry
 (Rimmer, Susan M.)

sedimentary

rocks--geochemistry
organic materials: Some
results of Eastern Gas
Shale Program of interest
to Illinois Basin

- operators (Howard, James)
 sedimentary rocks--organic
 residues
 - bituminous coal: SEM-EDX characterization of macerals in dull and impure coal layers, Herrin Coal, Illinois (Costanza, S. H.)
 - -- Trace element geochemistry of Herrin (No. 6) Coal in the Illinois Basin (Chou, Chen-Lin)
 - coal: Erosional channels in the Herrin (No. 6) Coal at Old Ben No. 24 Mine, Franklin County, Illinois (DeMaris, Philip J.)
 - -- Organic matter in a coal ball; peat or coal? (Hatcher, Patrick G.)
 - -- Pennsylvanian coalfield rhizomorphs in Illinois , evidence for
 - non-compressive coalification to bituminous coal rank (Baird, Gordon C.)
 - -- Pennsylvanian coalified rhizomorphs in Illinois; evidence for non-compressive coalification to bituminous coal rank (Baird, G. C.)
 - -- Regional zonal distribution of ore formation and coal metamorphism (Matveyev, A. K.)
- sedimentary structures see
 also sedimentary rocks;
 sediments

sedimentary

structures--environmental analysis

intertidal environment:
 Tidal deposition of
 Cypress, Ridenhower, and
 Bethel sandstones
 (Chesterian, Late
 Mississippian), La Salle
 anticlinal belt, Lawrence
 and Crawford counties,
 Illinois (Seyler, Beverly)

sedimentary structures--planar bedding structures

channels: Erosional
channels in the Herrin
(No. 6) Coal at Old Ben
No. 24 Mine, Franklin
County, Illinois (DeMaris,
Philip J.)

sedimentary

structures--primary structures

channels: The Galatia
Channel, a Pennsylvanian
channel complex in western

Gibson County, Indiana (Eggert, D. L.)

sedimentary

structures--secondary structures

concretions: So-called limestone "concretions" in Pennsylvanian black "shales"; carbonate oases in Carboniferous carbonaceous environments (Merrill, Glen K.)

geodes: Warsaw geodes
 (Martin, Willard E.)

sedimentation--controls
hydrogeological controls:
 Geology and paleopedology
 of the Koster

archeological site, Greene County, Illinois (Hajic, Edwin Robert)

tectonic controls: Facies transitions in Upper Cambrian strata of the Midcontinent region; tectonic implications (Weaverling, P. H.)

sedimentation--deposition
environment: Trace fossils
and environments of
deposition of the
Caseyville and Abbott
formations (Lower
Pennsylvanian) of southern
Illinois (Stanley,

Roderick G.)

processes: Geology and

paleopedology of the

Koster archeological site,

Greene County, Illinois

(Hajic, Edwin R.)

suspended materials:
Chemical characteristics
of lake sediments
(Barcelona, Michael J.)

sedimentation--environment
anaerobic environment:
Paleoenvironment of the
New Albany Shale Group
(Devonian-Mississippian)
of Illinois (Cluff, Robert
M.)

deltaic environment: Delta environments of the lower Chesterian (Mississippian) in southern Illinois (Seyler, Beverly)

(Seyler, Beverly)
fluvial environment:
Erosional channels in the
Herrin (No. 6) Coal at Old
Ben No. 24 Mine, Franklin
County, Illinois (DeMaris,
Philip J.)

-- Sedimentology and bathymetry of Pool 26, Mississippi River (Goodwin, Jonathan H.)

-- Sedimentology of terrace deposits at bend area of Wabash River (Fraser, Gordon S.)

- -- The Galatia Channel, a Pennsylvanian channel complex in western Gibson County, Indiana (Eggert, D. L.)
- intertidal environment:
 Carbonate microfacies of
 the Platteville Group
 (Middle Ordovician), Lee
 and Lasalle counties,
 Illinois (Kuhnhenn, Gary
 Lee)
- -- Facies and the environments of deposition of the LaSalle Cyclothem in North-Central Illinois (Nolde, Jack E.)
- (Nolde, Jack E.)
 -- Tidal deposition of
 Cypress, Ridenhower, and
 Bethel sandstones
 (Chesterian, Late
 Mississippian), La Salle
 anticlinal belt, Lawrence
 and Crawford counties,
 Illinois (Seyler, Beverly)
- lacustrine environment:
 Controlling sediment by
 watershed management
 techniques (Sundmacker,
 Harvey).
- -- Sedimentology and Woodfordian history of Lake Saline, southern Illinois (Heinrich, Paul V.)
- marine environment:
 So-called limestone
 "concretions" in
 Pennsylvanian black
 "shales"; carbonate oases
 in Carboniferous
 carbonaceous environments
 (Merrill, Glen K.)
- nearshore environment:
 Trace fossils and
 environments of deposition
 of the Aux Vases Formation
 and the Joppa Member of
 the Ste. Genevieve
 Formation (Middle
 Mississippian) in
 southeastern Missouri and
 southern Illinois (McKay,
 R. H.)
- reefs: Anastrophic deposition in the Silurian dolomites of the Chicago area (Peczkis, Jan)
- -- Eustatic sea-level control of Silurian (Niagaran) reefs, Michigan Basin (McGovney, James E.)
- -- Geology and geophysics of Spring Garden area, Jefferson County, Illinois (Caserotti, Phillip M.)
- -- Reef and interreef water depths on the Silurian Wabash Platform of

- northern Indiana (Shaver, Robert H.)
- -- Resedimented deposits and evolution of Thornton Reef (Niagaran), northeastern Illinois (McGovney, James E.)
- sebkha environment:
 Carbonate microfacies and depositional environments of the Joachim Dolomite (Middle Ordovician), Southeast Missouri and southern Illinois, U.S.A. (Okhravi, Rasool)
- shelf environment: The
 paleoenvironment of the
 Cedar Valley Limestone
 (Middle Devonian) in
 northwestern Illinois
 (Winkle, Candace J.)
- sedimentation--processes
 - glacial sedimentation:
 Quaternary
 paleoenvironmental chance
 - , paleoenvironmental changes in Illinois (King, James E.)
 - -- Subglacial mixing processes and the matrix uniformity of basal tills of the Laurentide ice sheet in Iowa and Illinois, U.S.A. (Kemmis, T. J.)
 - -- Variability in the nature and types of glacial sedimentation within the Woodfordian Substage in Illinois (Johnson, W. Hilton)
- sedimentation--sedimentation rates
 - deposition: Dredged
 sediment for agriculture;
 Lake Paradise (Lembke, W.
 D.)
 - rivers: Sedimentology and geochemistry of backwater lakes on the Illinois River (Cahill, Richard A.)
- sedimentation--transport
 glacial transport:
 - Implications of
 Implications of
 stratigraphic studies to
 mapping regional
 distribution of drift
 aquifers in Illinois
 (Kempton, John P.)
 - stream transport:
 Refinement and
 verification of predictive
 models of suspended
 sediment dispersion and
 desorption of toxics from
 dredged sediments
 (Schnoor, J. L.)
- sediments see also sedimentary
 rocks; sedimentary
 structures; sedimentation

- sediments--clastic sediments
 composition: Stratigraphy
 of Lake Michigan Formation
 in Lake Michigan's
 Southern Basin (Pranschke,
 Frank A.)
 - -- Variability in the nature and types of glacial sedimentation within the Woodfordian Substage in Illinois (Johnson, W. Hilton)
 - drift: Implications of
 stratigraphic studies to
 mapping regional
 distribution of drift
 aquifers in Illinois
 (Kempton, John P.)
 - environmental analysis:
 Late Wisconsinan history
 of the middle Wabash River
 valley (Bleuer, N. K.)
 - lake sediments: Quaternary
 paleoenvironmental changes
 in Illinois (King, James
 E.)
 - lithofacies: Stratigraphy
 of Woodfordian till and
 lake beds in Iroquois and
 neighboring counties,
 Illinois (Moore, David W.)
 - till: A possible
 paleo-overpressured sand
 in glacial deposits of
 central Illinois (Vaiden,
 Robert)

sediments--composition

lake sediments:
 Sedimentology and
 Woodfordian history of
 Lake Saline, southern
 Illinois (Heinrich, Paul
 V.)

sediments--distribution
 grain size: Sedimentology
 and bathymetry of Pool 26,
 Mississippi River

(Goodwin, Jonathan H.) sediments--geochemistry

trace elements:
Sedimentology and
geochemistry of backwater
lakes on the Illinois
River (Cahill, Richard A.)

seismic surveys see under
geophysical surveys
seismology see also
engineering geology

seismology
 crust: Ancient rift complex
 and related seismicity in
 the northern Mississippi
 Embayment area (Braile, L.
 W.)

earthquakes: A joint hypocenter relocation study in the New Madrid seismic zone (Himes, L. D.)

seismology--earthquakes

focus: A joint hypocenter relocation study in the New Madrid seismic zone (Himes, L. D.)

-- Geologic-tectonic history of the area surrounding the northern end of the Mississippi Embayment (Schwalb, H. R.)

modified Mercalli scale:
The events of February 4,
1983, Michigan, Indiana,
and Illinois (Sleep,
Norman H.)

seismic sources: Ancient rift complex and related seismicity in the northern Mississippi Embayment area (Braile, L. W.)

seismology--seismicity

tilt: Microgravity changes
in the Mississippi
Embayment (Wei, Meng Hua)

shale see under clastic rocks under sedimentary rocks

shore features see under geomorphology

shorelines see also under
engineering geology
Silurian see also under

stratigraphy
slope stability see also
engineering geology;
geomorphology

soil mechanics see also rock
mechanics

soil mechanics--materials,
properties

cohesive materials: Intact
 and remolded dynamic
 stress-strain properties
 of well-graded cohesive
 soils (Silver, Marshall
 L.)

failures: Geologic controls
 on mine subsidence in
 Illinois (Bradford, Susan
 C.)

soils

geochemistry: A new method
for determination of
/15_N-labeled nitrous
oxide (Mulvaney, R. L.)

-- Copper (II) binding by humic acid extracted from sewage sludge; an electron spin resonance study (Boyd, Stephen A.)

-- Effect of soil cation exchange capacity on the uptake of cadmium by corn (Hinesly, T. D.)

maps: Soil survey of
 Iroquois County, Illinois
 (Kiefer, Linus M.)

Paleosols: Geology and paleopedology of the Koster archeological site, Greene County, Illinois

(Hajic, Edwin Robert)
water regimes: Trickle
irrigation; a study of
moisture distribution in
the soil profile
(Mostaghimi, Saied)

soils--geochemistry
cadmium: Effect of soil
cation exchange capacity
on the uptake of cadmium
by corn (Hinesly, T. D.)

soils--surveys

A new method for determination of /15_N-labeled nitrous oxide (Mulvaney, R. L.)

-- Copper (II) binding by humic acid extracted from sewage sludge; an electron spin resonance study (Boyd, Stephen A.)

-- Electrical resistivity and soil studies at the Range archaeological site (11-5-47), St. Clair / County, Illinois

(Calengas, Peter L.)

-- Geology and paleopedology of the Koster archeological site, Greene County, Illinois (Hajic, Edwin Robert)

-- Retention of Zinc, cadmium, copper, and lead by geologic materials (Gibb, James P.)

-- Soil survey of Iroquois County, Illinois (Kiefer, Linus M.)

-- The off-site sediment damage function in selected Illinois watersheds (Guntermann, Karl L.)

-- Trickle irrigation; a study of moisture distribution in the soil profile (Mostaghimi, Saied)

-- Usefulness of sediment oxygen demand as a tool for impoundment management (Barcelona, Michael J.)

solution features see under
geomorphology

spectrometry see spectroscopy
spectroscopy see also chemical
 analysis; X-ray analysis
spectroscopy--methods

applications: Application and comparison of neutron activation analysis with other analytical methods for the analysis of coal (Cahill, R. A.)

springs see also ground water
standard materials--coal

chemical analysis:
 Application and comparison
 of neutron activation

analysis with other analytical methods for the analysis of coal (Cahill, R. A.)

stratigraphy

archaeology: Electrical resistivity and soil studies at the Range archaeological site (i1-S-47), St. Clair County, Illinois (Calengas, Peter L.)

-- Geology and paleopedology of the Koster archeological site, Greene County, Illinois (Hajic, Edwin Robert)

-- Geology and
paleopedology of the
Koster archeological site,
Greene County, Illinois
(Hajic, Edwin R.)

-- Indian artifacts and museums in Illinois and Missouri (Boyd, R. H.)

-- Why I am interested in fossils (Allaway, Bill)

Cambrian: Facies
transitions in Upper
Cambrian strata of the
Midcontinent region;
tectonic implications
(Weaverling. P. H.)

(Weaverling, P. H.)

Carboniferous: Conodonts
from the Middle
Carboniferous of southern
Illinois and the base of
the Pennsylvanian System
(Merrill Glen K.)

(Merrill, Glen K.)

Cenozoic: Stratigraphy of
Lake Michigan Formation in
Lake Michigan's Southern
Basin (Pranschke, Frank
A.)

changes of level: Holocene
 and modern history of a
 beach ridge and dune
 plane, Lake Michigan
 (Collinson, Charles)

(Collinson, Charles)

Devonian: A Detroit River
(Middle Devonian) fauna
from the subsurface of
Illnois (Linsley, Robert
M.)

-- Brachiopod paleoecology, paleobiogeography, and biostratigraphy in the upper Middle Devonian of eastern North America; an ecofacies model for the Appalachian, Michigan, and Illinois basins (Koch, William F., II)

-- The New Albany Shale Group of Illinois (Cluff, Robert M.)

Mississippian: Delta environments of the lower Chesterian (Mississippian) in southern Illinois

- (Seyler, Beverly)
 -- Macropaleontology of the uppermost Mississippian and basal Pennsylvanian strata in the southern part of the Illinois Basin (Jennings, James R.)
- -- The Mississippian Valmeyeran-Chesterian series boundary (Norby, R. D.)
- -- Tidal deposition of Cypress, Ridenhower, and Bethel sandstones (Chesterian, Late Mississippian), La Salle anticlinal belt, Lawrence and Crawford counties, Illinois (Seyler, Beverly)
- -- Trace fossils and environments of deposition of the Aux Vases Formation and the Joppa Member of the Ste. Genevieve Formation (Middle Mississippian) in southeastern Missouri and southern Illinois (McKay, R. H.)
- Ordovician: Carbonate microfacies of the Platteville Group (Middle Ordovician), Lee and Lasalle counties, Illinois (Kuhnhenn, Gary Lee)
- -- Preliminary
 lithostratigraphy and
 biostratigraphy of the
 Maquoketa Group (Upper
 Ordovician), northern
 Illinois (Votaw, Robert
 B.)
- Pennsylvanian: Facies and the environments of deposition of the LaSalle Cyclothem in North-Central Illinois (Nolde, Jack E.)
- -- Macropaleontology of the uppermost Mississippian and basal Pennsylvanian strata in the southern part of the Illinois Basin (Jennings, James R.)
- -- Paleontology and stratigraphy of the Mattoon Formation (Pennsylvanian), Coles County, Illinois (Bandy, William F., Jr.)
- -- Paleontology and stratigraphy of the Mattoon Formation (Pennsylvanian), Coles County, Illinois (Bandy, William F., Jr.)
- -- So-called limestone
 "concretions" in
 Pennsylvanian black
 "shales"; carbonate oases
 in Carboniferous

- carbonaceous environments (Merrill, Glen K.)
- -- The Galatia Channel, a Pennsylvanian channel complex in western Gibson County, Indiana (Eggert, D. L.)
- -- Trace fossils and environments of deposition of the Caseyville and Abbott formations (Lower Pennsylvanian) of southern Illinois (Stanley, Roderick G.)
- Pleistocene: Late
 Wisconsinan history of the
 middle Wabash River valley
 (Bleuer, N. K.)
- -- Paleoecology of a fossil plant assemblage from a pre-Wisconsinan till in southern Illinois (Jackson, Stephen T.)
- -- Sedimentology and
 Woodfordian history of
 / Lake Saline, southern
 Illinois (Heinrich, Paul
 V.)
- -- Statistical confirmation of the field discrimination of till units with particular reference to a local Radnor section in Woodford County, Illinois (Kirchner, James G.)
- -- Stratigraphy of Woodfordian till and lake beds in Iroquois and neighboring counties, Illinois (Moore, David W.)
- processes and the matrix uniformity of basal tills of the Laurentide ice sheet in Iowa and Illinois, U.S.A. (Kemmis, T. J.)
- -- Woodfordian-Holocene mollusc biogeography of Iowa and Illinois (Frest, T. J.)
- Quaternary: Late- and postglacial pollen studies from the Zuehl farm site, north-central Iowa and Cattail Channel Bog, northwestern Illinois (Kim, H. K.)
- -- Late Quaternary vegetation of Illinois, USA (King, James E.)
- -- Quaternary paleoenvironmental changes in Illinois (King, James E.)
- -- Woodfordian subcrop and intensity of glacial erosion in McLean County, Illinois (Nelson, Robert

- S.)
- Silurian: Anastrophic deposition in the Silurian dolomites of the Chicago area (Peczkis, Jan)
- -- Eustatic sea-level control of Silurian (Niagaran) reefs, Michigan Basin (McGovney, James E.)
- -- Fauna of the Racine Dolomite (Niagaran), Grafton, Illinois (Garney, Ronald T.)
- -- Reef and interreef water depths on the Silurian Wabash Platform of northern Indiana (Shaver, Robert H.)

structural geology

- faults: Wrench faulting
 within the Illinois Basin;
 an hypothesis (Trapp, John
 S.)
- folds: Wrench faulting
 within the Illinois Basin;
 an hypothesis (Trapp, John
 S.)

tectonics:

- Geologic-tectonic history of the area surrounding the northern end of the Mississippi Embayment (Schwalb, H. R.)
- -- Intracratonic basins; erosional remnants, bulls-eyes and mantle sinks (Smith, Leigh)
- -- Structural framework and tectonic evolution of the New Madrid seismic zone, central United States (Russ, David P.)

sulfur--geochemistry

- ground water: The chemistry of reduced sulfur species and their removal from groundwater supplies (Dohnalek, David A.)
- sulfur--isotopes
 - 5-34/5-32: H, O, and S
 isotopic study of the
 groundwater in the
 Cambrian-Ordovician
 aquifer system of northern
 Illinois (Perry, Eugene
 C., Jr.)
 - Isotopic and geologic studies to identify the sources of sulfate in groundwater containing high barium concentrations (Gilkeson, Robert H.)
- sulphur see sulfur
 survey organizations see also
 associations
- survey organizations--current research
 - Illinois State Geological
 Survey: Illinois State
 Geological Survey (Brower,

R. D.)

Illinois State Water Survey:
 Illinois State Water
 Survey (Schicht, R. J.)

U. S. Geological Survey:
Functions and activities
of Office of Water Data
Coordination (Ward, P. E.)
-- U. S. Geological Survey

(Balding, G. O.) survey organizations--research

Illinois State Geological
Survey: Application and
comparison of neutron
activation analysis with
other analytical methods
for the analysis of coal
(Cahill, R. A.)

symposia--economic geology water resources:

Proceedings, Illinois water-data users meeting (Toler, L. G.)

symposia--hydrogeology
hydrology: Proceedings of a
Round table on reclaiming
and managing lakes in
Illinois (Stout, Glenn E.)

tectonics see also faults; structural geology;see also under structural geology under Alberta; Midwest; Mississippi Valley

tectonophysics
 plate tectonics: A
 three-plate model of the
 Midcontinent Gravity High
 (Dutch, Steven I.)

-- Ancient rift complex and related seismicity in the northern Mississippi Embayment area (Braile, L. W.)

temperature see under regional metamorphism under metamorphism

thermal analysis see also
 chemical analysis;
 spectroscopy; X-ray analysis

thorium--isotopes
Th-232/Th-230: Isotopic
 composition of uranium and
 thorium in crystalline
 rocks (Rosholt, John N.)

trace elements see under
geochemistry;see under
geochemistry under Midwest;
sediments

tracks and trails see ichnofossils

Trilobita--faunal studies
Silurian: Fauna of the
Racine Dolomite
(Niagaran), Grafton,
Illinois (Garney, Ronald
T.)

tritium see also deuterium;
hydrogen

tritium--abundance

ground water: Data for wells at the low-level radioactive-waste burial site in the Palos Forest Preserve, Illinois (Olimpio, J. C.)

-- Low-level radioactive-waste burial at the Palos Forest Preserve, Illinois; Part II, Geology and hydrology of the glacial drift as related to the migration of tritium (Olimpio, U. C.)

tunnels see also under engineering geology

underground installations see
 also under engineering
 geology

underground installations--mines production control: A

potential method for predicting coal-mine floor heave (Speck, Robert C.)

-- Prediction of geologic anomalies in advance of mining; three case studies (Danner, Stephen K.)

site exploration:
 Preliminary investigations
 for underground coal mines
 (Chugh, Yoginder P.)

underground water see ground water

United States see also California; Midwest uranium--isotopes

U-238/U-234: A preliminary report on /238_uranium series disequilibrium in groundwater of the Cambrian-Ordovician aquifer system of northeastern Illinois (Gilkeson, Robert H.)

-- Isotopic composition of uranium and thorium in crystalline rocks (Rosholt, John N.)

uranium ores see also under
economic geology
Vertebrata see also
ichnofossils; problematic
fossils

Waste disposal see also under engineering geology Waste disposal--solid Waste

toxic materials: Why not my back yard? (Willard, Daniel E.)

water see also ground water;
 hydrogeology; hydrology
water resources see also under
 economic geology; see also
 under economic geology under
 symposia

water resources--resources
water management: Water
 rights for humid regions
 (Eheart, J. W.)

waterways see also under
 engineering geology;see also
 under engineering geology
 under automatic data
 processing; Mississippi
 Valley

well-logging--interpretation pollution: Data for wells at the low-level radioactive-waste burial site in the Palos Forest Preserve, Illinois (Olimpio, J. C.)

well-logging--radioactivity
gamma-ray methods: Some
results of Eastern Gas
Shale Program of interest
to Illinois Basin
operators (Howard, James)

Western U.S. see also

X-ray analysis see also
 chemical analysis;
 spectroscopy

X-ray analysis--X-ray fluorescence

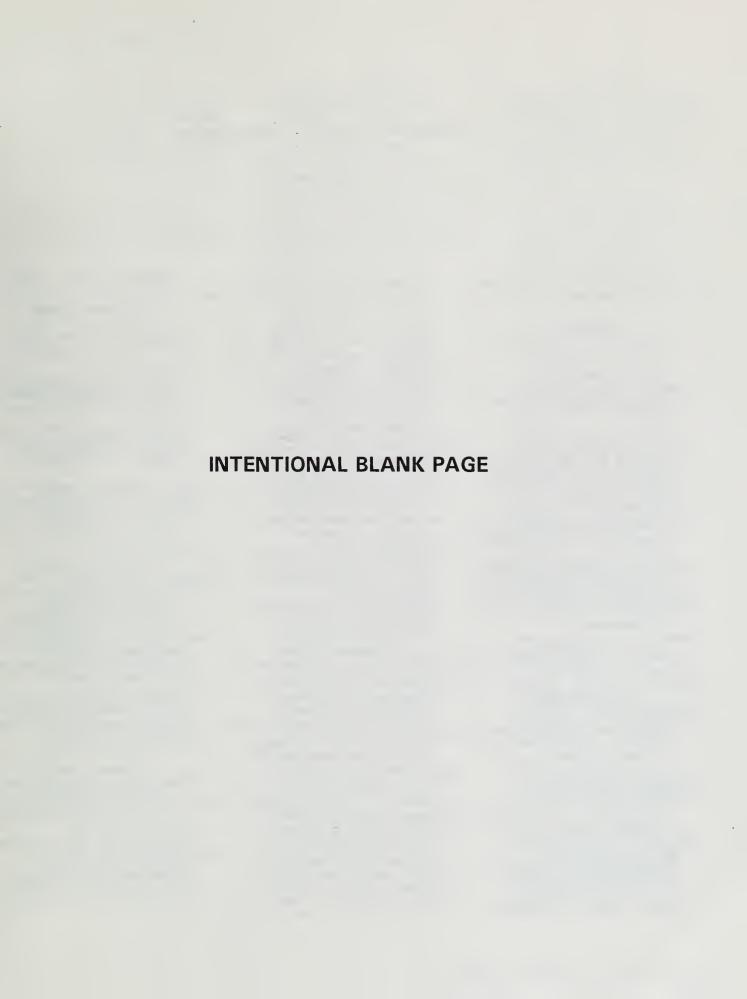
applications: Application and comparison of neutron activation analysis with other analytical methods for the analysis of coal (Cahill, R. A.)

X-ray fluorescence see under X-ray analysis

zinc--geochemistry ground water: R

ground water: Retention of zinc, cadmium, copper, and lead by geologic materials (Gibb, James P.)

zoogeography see biogeography



BIBLIOGRAPHY AND INDEX OF ILLINOIS GEOLOGY

COUNTY INDEX

Alexander County Reinertsen, David L. A guide to the geology of the Cairo area

Bureau County Foster, James B. Sheffield, Illinois

Calhoun County Goodwin, Jonathan H. Sedimentology and bathymetry of Pool 26, Mississippi River

Christian County

Harvey, R. D. Petrology of New Albany Shale Group (Upper Devonian and Kinderhookian) in the Illinois Basin; a preliminary report

Howard, James. Some results of Eastern Gas Shale Program of interest to Illinois Basin operators

Thomas, Josephus, Jr. Internal surface area and porosity in Eastern gas shales from the sorption of nitrogen, carbon dioxide, and methane; a status report

Clay County

Eheart, J. W. Water rights for humid regions

Clinton County

Lovely, Daniel A. The application of remote sensing for the detection of Niagaran pinnacle reefs in the Illinois Basin

Coles County

Bandy, William F., Jr. Paleontology and stratigraphy of the Mattoon Formation (Pennsylvanian), Coles County, Illinois Bandy, William F., Jr. Paleontology and stratigraphy of the Mattoon Formation (Pennsylvanian), Coles County, Illinois Linsley, Robert M. A Detroit

River (Middle Devonian) fauna from the subsurface of Illnois

Cook County

Buschbach, T. C. Geology and deep tunnels in Chicago Olimpio, J. C. Data for wells at the low-level radioactive-waste burial site in the Palos Forest Preserve, Illinois

Olimpio, J. C. Low-level radioactive-waste burial at the Palos Forest Preserve, Illinois: Part II. Geology and hydrology of the glacial drift as related to the migration of tritium

U. S. Geological Survey. Land use and land cover and associated maps for Racine, Michigan, Wisconsin, Illinois

Visocky, Adrian P. Impact of Lake Michigan allocations on the Cambrian-Ordovician aquifer system

Visocky, Adrian P. Shades of immortality (where do we hang the plaque?)

Crawford County

Davis, John A. An overview of micellar flooding Seyler, Beverly, Tidal deposition of Cypress, Ridenhower, and Bethel sandstones (Chesterian, Late Mississippian), La Salle anticlinal belt, Lawrence and Crawford counties, Illinois

Du Page County

Buschbach, T. C. Geology and deep tunnels in Chicago Olimpio, J. C. Argonne National Laboratory site Peczkis, Jan. Anastrophic deposition in the Silurian dolomites of the Chicago area Visocky, Adrian P. Impact of

Lake Michigan allocations on

the Cambrian-Ordovician aquifer system

Effingham County Cluff, Robert M. The New

Albany Shale Group of Illinois

Eheart, J. W. Water rights for humid regions

Howard, James. Some results of Eastern Gas Shale Program of interest to Illinois Basin operators

Niccum, Dwight A. Prevention of shoreline erosion by physical and structural methods

Franklin County DeMaris, Philip J. Erosional channels in the Herrin (No. 6) Coal at Old Ben No. 24 Mine, Franklin County, Illinois

Fulton County

Kosanke, Robert M. Illustrations and comments concerning the type specimens of Calamospora, Florinites, and Raistrickia Patterson, G. L. Hydrologic characteristics of surface-mined land reclaimed by sludge irrigation, Fulton County, Illinois

Patterson, G. L. Hydrologic effects of storing liquified sewage sludge on strip-mined land, Fulton County, Illinois

Gallatin County

Bikerman, Michael. K-Ar ages of phlogopite from mica peridotite, Omaha oil field intrusion, Gallatin County, southern Illinois

Lewis, Richard. Petrology and mineralogy of the monticellite alnoite associated with the Omaha oil field, Gallatin County, Illinois

Greene County

Hajic, Edwin R. Geology and paleopedology of the Koster archeological site, Greene County, Illinois

Hajic, Edwin Robert. Geology and paleopedology of the Koster archeological site. Greene County, Illinois

Grundy County Schram, Frederick R. New euthycarcinoid arthropods from the Upper Pennsylvanian of France and Illinois

Hamilton County Sexton, John L. Seismic reflection surveying in the Wabash River Valley

Hancock County Martin, Willard E. Warsaw aeodes

Hardin County Cluff, Robert M. The New Albany Shale Group of Illinois

Henderson County Cluff, Robert M. The New Albany Shale Group of Illinois

Howard, James. Some results of Eastern Gas Shale Program of interest to Illinois Basin operators

Iroquois County

Kiefer, Linus M. Soil survey of Iroquois County, Illinois Moore, David W. Stratigraphy of Woodfordian till and lake beds in Iroquois and neighboring counties, Illinois

U. S. Geological Survey. Land use and land cover and associated maps for Danville, Illinois: Indiana

Jackson County

Jackson, Stephen T. Paleoecology of a fossil plant assemblage from a pre-Wisconsinan till in southern Illinois Jacobson, Russell J. Murphysboro coal, Jackson and Perry counties; resources with low to medium sulfur potential

Jefferson County Caserotti, Phillip M. Geology and geophysics of Spring Garden area, Jefferson County, Illinois Pigg, Kathleen B. Chaloneria

gen. nov.; heterosporous lycophytes from the Pennsylvanian of North America

Jersey County Frasz, Geoffrey, Brainard Cave, Jersey County, Illinois

Garney, Ronald T. Fauna of the Racine Dolomite (Niagaran), Grafton, Illinois

Goodwin, Jonathan H. Sedimentology and bathymetry of Pool 26, Mississippi River

Kane County

Gilkeson, Robert H. Isotopic and geologic studies to identify the sources of sulfate in groundwater containing high barium concentrations

Visocky, Adrian P. Impact of Lake Michigan allocations on the Cambrian-Ordovician aquifer system

Kankakee County

Hinesly, T. D. Effect of soil cation exchange capacity on the uptake of cadmium by corn

McGhee, George R., Jr. First occurrence of the problematical fossil Vetacapsula in North America

Kendall County

Naymik, Thomas G. Modeling as a tool in monitoring well network design

La Salle County

Baird, G. C. Pennsylvanian coalified rhizomorphs in Illinois; evidence for non-compressive coalification to bituminous coal rank

Baird, Gordon C. Pennsylvanian coalfield rhizomorphs in Illinois evidence for non-compressive coalification to bituminous coal rank

Coveney, Raymond M., Jr. Molybdenum and other heavy metals of the Mecca Quarry and Logan Quarry shales

Haigh, Martin J. Erosion of strip mine dumps in La Salle County, Illinois; preliminary results

Kuhnhenn, Gary Lee. Carbonate microfacies of the Platteville Group (Middle Ordovician), Lee and Lasalle counties, Illinois

Lake County
Sherrill, M. G. Piezometers in deep test well in northeast Illinois

U. S. Geological Survey. Land use and land cover and associated maps for Racine, Michigan, Wisconsin, Illinois

Lawrence County Good, Charles W. Studies of Sphenophyllum shoots; species delimitation within the taxon Sphenophyllum

Rothwell, Gar W. Ontogeny of the Paleozoic ovule. Callospermarion pusillum

Rothwell, Gar W. Pollen organs of the Pennsylvanian Callistophytaceae (Pteridospermopsida)

Seyler, Beverly. Tidal deposition of Cypress, Ridenhower, and Bethel sandstones (Chesterian, Late Mississippian), La Salle anticlinal belt, Lawrence and Crawford counties, Illinois

Stidd, Benton M. Callandrium callistophytoides, gen. et sp. nov., the probable pollen-bearing organ of the seed fern, Callistophyton

Taylor, Thomas N. Lasiostrobus gen. n., a staminate strobilus of gymnospermous affinity from the Pennsylvanian of North America

Taylor, Thomas N. Halletheca reticulatus gen. et sp. n.; a synangiate Pennsylvanian pteridosperm pollen organ

Lee County

Eckert, Stephen M. Drainage evolution of the Bureau Creek basin, in central-northern Illinois Kuhnhenn, Gary Lee. Carbonate microfacies of the Platteville Group (Middle Ordovician), Lee and Lasalle counties, Illinois

Madison County Goodwin, Jonathan H. Sedimentology and bathymetry of Pool 26, Mississippi River

McHenry County Gilkeson, Robert H. Isotopic and geologic studies to identify the sources of sulfate in groundwater containing high barium concentrations

McLean County

Nelson, Robert S. Woodfordian subcrop and intensity of glacial erosion in McLean County, Illinois

Monroe County

Frasz, Geoffrey B. Twenty miles under Illinois; the land and the caves Strimple, H. L. The Chesteran crinoid species Agassizocrinus dissimilis Weller

Peoria County
Cluff, Robert M. The New
Albany Shale Group of
Illinois

Perry County
Jacobson, Russell J.
Murphysboro coal, Jackson
and Perry counties;
resources with low to medium
sulfur potential

Pike County

Eggert, D. L. The Galatia Channel, a Pennsylvanian channel complex in western Gibson County, Indiana

Richland County
Eheart, J. W. Water rights for humid regions

Saint Clair County
Calengas, Peter L. Electrical
resistivity and soil studies
at the Range archaeological
site (11-S-47), St. Clair
County, Illinois
Strimple, H. L. The Chesteran

Strimple, H. L. The Chesterar crinoid species Agassizocrinus dissimilis Weller

U. S. Geological Survey. Land use and land cover and associated maps for Belleville, Illinois; Indiana

Saline County

Eggert, D. L. The Galatia Channel, a Pennsylvanian channel complex in western Gibson County, Indiana

Pigg, Kathleen B. Chaloneria gen. nov.; heterosporous lycophytes from the Pennsylvanian of North America

Stidd, Benton M. The vegetative anatomy of Schopfiastrum decussatum from the Middle Pennsylvanian of the Illinois Basin

Sangamon County

Cluff, Robert M. The New Albany Shale Group of Illinois

Harvey, R. D. Petrology of New Albany Shale Group (Upper Devonian and Kinderhookian) in the Illinois Basin; a preliminary report

Thomas, Josephus, Jr. Internal surface area and porosity in Eastern gas shales from the sorption of nitrogen, carbon dioxide, and methane; a status report

Scott County

U. S. Geological Survey. Land use and land cover and associated maps for Davenport, Iowa; Illinois

Shelby County
Eheart, J. W. Water rights for humid regions

Tazewell County
Cluff, Robert M. The New
Albany Shale Group of
Illinois

Vermilion County

Coveney, Raymond M., Jr.
Molybdenum and other heavy
metals of the Mecca Quarry
and Logan Quarry shales
Kosanke, Robert M.

Illustrations and comments concerning the type specimens of Calamospora, Florinites, and Raistrickia

U. S. Geological Survey. Land use and land cover and associated maps for Danville, Illinois; Indiana

Warren County

U. S. Geological Survey. Land use and land cover and associated maps for Danville, Illinois; Indiana

Washington County
Hatcher, Patrick G. Organic
matter in a coal ball; peat

or coal?

Wayne County
Cluff, Robert M. Depositional
environments and diagenesis
of Salem Limestone (Middle
Mississippian) reservoirs in
southern Illinois

Cluff, Robert M. The New Albany Shale Group of Illinois

Eheart, J. W. Water rights for humid regions

White County
Sexton, John L. Seismic
reflection surveying in the
Wabash River Valley

Will County

Buschbach, T. C. Geology and deep tunnels in Chicago Goulter, I. C. Analyzing floodplain policies using an interdependent land use allocation model

McGhee, George R., Jr. First occurrence of the problematical fossil Vetacapsula in North America Visocky, Adrian P. Impact of

Visocky, Adrian P. Impact of Lake Michigan allocations on the Cambrian-Ordovician aquifer system

Williamson County

Leisman, Gilbert A. A new pteridosperm male fructification from the Middle Pennsylvanian of Illinois

Millay, Michael A.
Idanothekion gen. n., a
synangiate pollen organ with
saccate pollen from the
Middle Pennsylvanian of
Illinois

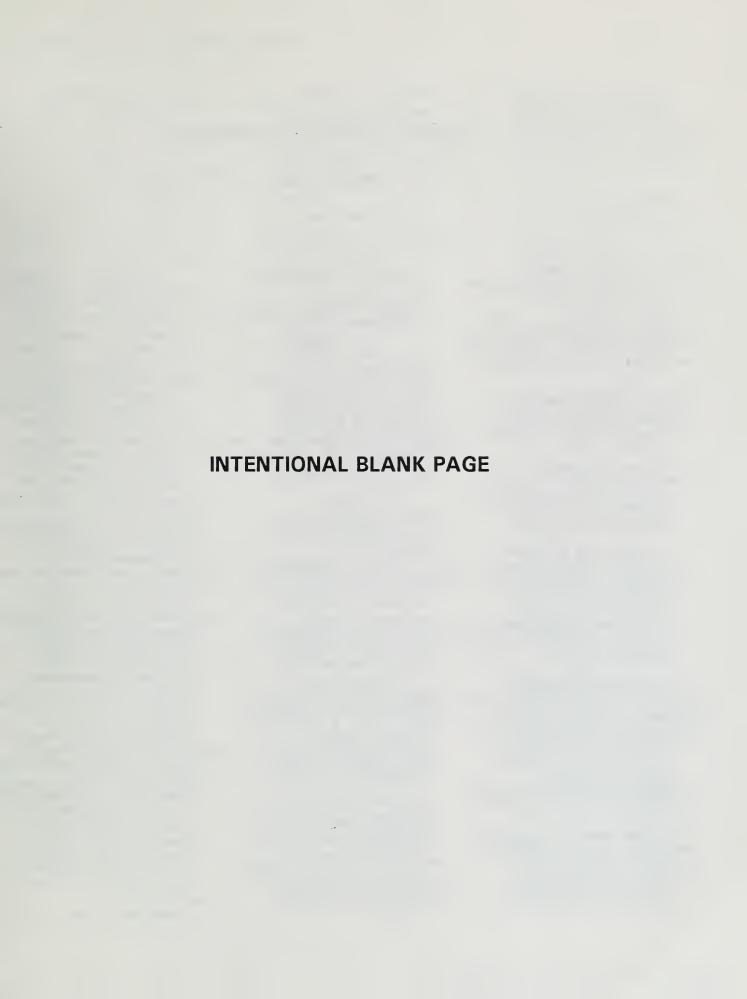
Rothwell, Gar W. Pollen organs of the Pennsylvanian Callistophytaceae (Pteridospermopsida)

Stidd, Benton M. The vegetative anatomy of Schopfiastrum decussatum from the Middle Pennsylvanian of the Illinois Basin

Winnebago County
Wehrmann, H. Allen. Nitrate
contamination of ground
water in the Roscoe area,
Winnebago County, Illinois

Woodford County

Kirchner, James G. Statistical confirmation of the field discrimination of till units with particular reference to a local Radnor section in Woodford County, Illinois



BIBLIOGRAPHY AND INDEX OF ILLINOIS GEOLOGY

ROCK-UNIT INDEX

Abbott Formation Phillips, Tom L. Pennsylvanian coal swamp floras in the Illinois Basin Stanley, Roderick G. Trace

Stanley, Roderick G. Trace fossils and environments of deposition of the Caseyville and Abbott formations (Lower Pennsylvanian) of southern Illinois

Anderdon Limestone Linsley, Robert M. A Detroit River (Middle Devonian) fauna from the subsurface of Illnois

Anna Shale

DeMaris, Philip J. Erosional channels in the Herrin (No. 6) Coal at Old Ben No. 24 Mine. Franklin County, Illinois

Anvil Rock Sandstone
Cartwright, K. Pore-water
pressure in the roof of an
underground coal mine in
Illinois

Archimedes Limestone
Norby, R. D. The Mississippian
Valmeyeran-Chesterian series
boundary

Aux Vases Formation
McKay, R. H. Trace fossils and
environments of deposition
of the Aux Vases Formation
and the Joppa Member of the
Ste. Genevieve Formation
(Middle Mississippian) in
southeastern Missouri and
southern Illinois

Norby, R. D. The Mississippian Valmeyeran-Chesterian series boundary

Banner Formation Aquifer
Kempton, John P. Hydrogeologic
evaluation of sand and
gravel aquifers for
municipal groundwater
supplies in East-central
Illinois

Beech Creek Limestone
Seyler, Beverly. Delta
environments of the lower
Chesterian (Mississippian)
in southern Illinois

Bethel Sandstone

Seyler, Beverly. Delta
environments of the lower
Chesterian (Mississippian)
in southern Illinois
Seyler, Beverly. Tidal
deposition of Cypress,
Ridenhower, and Bethel
sandstones (Chesterian, Late
Mississippian), La Salle
anticlinal belt, Lawrence
and Crawford counties,
Illinois

Blocher Shale
Cluff, Robert M. The New
Albany Shale Group of
Illinois

Booch Sandstone
Harris, D. G. Synergism in
reservoir management; the
geologic perspective

Bradford Sandstone
Harris, D. G. Synergism in
reservoir management; the
geologic perspective

Brainard Shale
Buschbach, T. C. Geology and deep tunnels in Chicago
Votaw, Robert B. Preliminary lithostratigraphy and biostratigraphy of the Maquoketa Group (Upper Ordovician), northern Illinois

Brereton Limestone .
Cartwright, K. Pore-water
pressure in the roof of an
underground coal mine in
Illinois

DeMaris, Philip J. Erosional channels in the Herrin (No. 6) Coal at Old Ben No. 24 Mine, Franklin County, Illinois Bull Fork Formation

Votaw, Robert B. Preliminary
lithostratigraphy and
biostratigraphy of the
Maquoketa Group (Upper
Ordovician), northern
Illinois

Cabaniss Formation
Good, Charles W. Studies of
Sphenophyllum shoots;
species delimitation within
the taxon Sphenophyllum

Carbondale Formation
Baird, G. C. Pennsylvanian
coalified rhizomorphs in
Illinois; evidence for
non-compressive
coalification to bituminous
coal rank

Baird, Gordon C. Pennsylvanian coalfield rhizomorphs in Illinois evidence for non-compressive coalification to bituminous coal rank

Coveney, Raymond M., Jr.
Molybdenum and other heavy
metals of the Mecca Quarry
and Logan Quarry shales

Good, Charles W. Studies of Sphenophyllum shoots; species delimitation within the taxon Sphenophyllum

Hatcher, Patrick G. Organic
 matter in a coal ball; peat
 or coal?

Jacobson, Russell J.

Murphysboro coal, Jackson
and Perry counties;
resources with low to medium
sulfur potential

Krothe, Noel C. Environmental aspects of ground water and surface water chemistry of the Carbondale Group of Indiana and Illinois

Leisman, Gilbert A. A new pteridosperm male fructification from the Middle Pennsylvanian of Illinois

Millay, Michael A.
Idanothekion gen. n., a

synangiate pollen organ with saccate pollen from the Middle Pennsylvanian of Illinois

Phillips, Tom L. Pennsylvanian coal swamp floras in the Illinois Basin

Pigg, Kathleen B. Chaloneria gen. nov.; heterosporous lycophytes from the Pennsylvanian of North America

Stidd, Benton M. The vegetative anatomy of Schopfiastrum decussatum from the Middle Pennsylvanian of the Illinois Basin

Taylor, Thomas N. A new Pennsylvanian fructification

Caseyville Formation
Jackson, Stephen T.
Paleoecology of a fossil
plant assemblage from a
pre-Wisconsinan till in
southern Illinois
Jennings, James R.

Macropaleontology of the uppermost Mississippian and basal Pennsylvanian strata in the southern part of the Illinois Basin

Merrill, Glen K. Conodonts from the Middle Carboniferous of southern Illinois and the base of the Pennsylvanian System

Stanley, Roderick G. Trace fossils and environments of deposition of the Caseyville and Abbott formations (Lower Pennsylvanian) of southern Illinois

Cedar Grove Church Formation
Merrill, Glen K. Conodonts
from the Middle
Carboniferous of southern
Illinois and the base of the
Pennsylvanian System

Cedar Valley Limestone
Koch, William F., II.
Brachiopod paleoecology,
paleobiogeography, and
biostratigraphy in the upper
Middle Devonian of eastern
North America; an ecofacies
model for the Appalachian,
Michigan, and Illinois
basins

Winkle, Candace J. The paleoenvironment of the Cedar Valley Limestone (Middle Devonian) in northwestern Illinois

Centerville Member
Koch, William F., II.
Brachiopod paleoecology,
paleobiogeography, and
biostratigraphy in the upper
Middle Devonian of eastern
North America; an ecofacies
model for the Appalachian,
Michigan, and Illinois
basins

Chatsworth moraine
Moore, David W. Stratigraphy
of Woodfordian till and lake
beds in Iroquois and
neighboring counties,
Illinois

Cherokee Group
Phillips, Tom L. Spores of
Botryopteris globosa and B.
americana from the
Pennsylvanian

Cherry Valley Formation
Koch, William F., II.
Brachiopod paleoecology,
paleobiogeography, and
biostratigraphy in the upper
Middle Devonian of eastern
North America; an ecofacies
model for the Appalachian,
Michigan, and Illinois
basins

Chester Group
Merrill, Glen K. Conodonts
from the Middle
Carboniferous of southern
Illinois and the base of the
Pennsylvanian System
Norby, R. D. The Mississippian
Valmeyeran-Chesterian series
boundary

Clarita Formation
Garney, Ronald T. Fauna of the
Racine Dolomite (Niagaran),
Grafton, Illinois

Clore Formation

Dyer, Rolla McIntyre.

Reservoir identification by chromatographic methods

Coralville Member
Winkle, Candace J. The
paleoenvironment of the
Cedar Valley Limestone
(Middle Devonian) in
northwestern Illinois

Cypress Sandstone
Harris, D. G. The role of
geology in reservoir
simulation studies
Seyler, Beverly. Delta
environments of the lower
Chesterian (Mississippian)
in southern Illinois

Seyler, Beverly. Tidal deposition of Cypress. Ridenhower, and Bethel sandstones (Chesterian, Late Mississippian), La Salle anticlinal belt, Lawrence and Crawford counties, Illinois

Degonia Sandstone
Harris, D. G. Synergism in reservoir management; the geologic perspective
Jennings, James R.
Macropaleontology of the uppermost Mississippian and basal Pennsylvanian strata in the southern part of the Illinois Basin

Detroit River Group
Linsley, Robert M. A Detroit
River (Middle Devonian)
fauna from the subsurface of
Illnois

Downeys Bluff Limestone
Seyler, Beverly. Delta
environments of the lower
Chesterian (Mississippian)
in southern Illinois

Drakes Formation
Votaw, Robert B. Preliminary
lithostratigraphy and
biostratigraphy of the
Maquoketa Group (Upper
Ordovician), northern
Illinois

Dubuque Formation
Votaw, Robert B. Preliminary
lithostratigraphy and
biostratigraphy of the
Maquoketa Group (Upper
Ordovician), northern
Illinois

Dundee Formation

Koch, William F., II.

Brachiopod paleoecology,
paleobiogeography, and
biostratigraphy in the upper
Middle Devonian of eastern

North America; an ecofacies
model for the Appalachian,
Michigan, and Illinois
basins

Dunleith Formation Buschbach, T. C. Geology and deep tunnels in Chicago

Eau Claire Formation
Buschbach, T. C. Geology and
deep tunnels in Chicago
Gilkeson, Robert H. Isotopic
and geologic studies to
identify the sources of
sulfate in groundwater

containing high barium concentrations

Elwood Formation
Buschbach, T. C. Geology and
deep tunnels in Chicago

Eminence Formation
Buschbach, T. C. Geology and
deep tunnels in Chicago

Energy Shale
DeMaris, Philip J. Erosional
channels in the Herrin (No.
6) Coal at Old Ben No. 24
Mine, Franklin County,
Illinois

Equality Formation
Moore, David W. Stratigraphy
of Woodfordian till and lake
beds in Iroquois and
neighboring counties,
Illinois

Fort Atkinson Limestone
Buschbach, T. C. Geology and
deep tunnels in Chicago
Votaw, Robert B. Preliminary
lithostratigraphy and
biostratigraphy of the
Maquoketa Group (Upper
Ordovician), northern
Illinois

Francis Creek Shale
McGhee, George R., Jr. First
occurrence of the
problematical fossil
Vetacapsula in North America

Franconia Formation
Visocky, Adrian P. Impact of
Lake Michigan allocations on
the Cambrian-Ordovician
aquifer system

Galatia Channel
Eggert, D. L. The Galatia
Channel, a Pennsylvanian
channel complex in western
Gibson County, Indiana

Galena Group
Votaw, Robert B. Preliminary
lithostratigraphy and
biostratigraphy of the
Maquoketa Group (Upper
Ordovician), northern
Illinois

Gilman moraine
Moore, David W. Stratigraphy
of Woodfordian till and lake
beds in Iroquois and
neighboring counties,
Illinois

Glasford Formation

Kempton, John P. Hydrogeologic evaluation of sand and gravel aquifers for municipal groundwater supplies in East-central Illinois

Nelson, Robert S. Woodfordian subcrop and intensity of glacial erosion in McLean County, Illinois

Golconda Formation
Beaver, Harold H. A new
hydrospire wall structure in
the blastoid Pentremites

Grand Detour Formation
Kuhnhenn, Gary Lee. Carbonate
microfacies of the
Platteville Group (Middle
Ordovician), Lee and Lasalle
counties, Illinois

Grand Tower Limestone
Linsley, Robert M. A Detroit
River (Middle Devonian)
fauna from the subsurface of
Illnois

Grassy Creek Shale Cluff, Robert M. The New Albany Shale Group of Illinois

Grove Church Formation

Jennings, James R.

Macropaleontology of the uppermost Mississippian and basal Pennsylvanian strata in the southern part of the Illinois Basin

Merrill, Glen K. Conodonts from the Middle Carboniferous of southern Illinois and the base of the Pennsylvanian System

Guttenberg Formation
Buschbach, T. C. Geology and
deep tunnels in Chicago

Hamilton Group

Koch, William F., II.

Brachiopod paleoecology,
paleobiogeography, and
biostratigraphy in the upper
Middle Devonian of eastern
North America; an ecofacies
model for the Appalachian,
Michigan, and Illinois
basins

Hannibal Shale Cluff, Robert M. The New Albany Shale Group of Illinois Herrin Coal

Cartwright, K. Pore-water pressure in the roof of an underground coal mine in Illinois

Chou, Chen-Lin. Trace element geochemistry of Herrin (No. 6) Coal in the Illinois Basin

Costanza, S. H. SEM-EDX characterization of macerals in dull and impure coal layers, Herrin Coal, Illinois

DeMaris, Philip J. Erosional channels in the Herrin (No. 6) Coal at Old Ben No. 24 Mine, Franklin County, Illinois

Hatcher, Patrick G. Organic
 matter in a coal ball; peat
 or coal?

Ko, Hon-Yim. Elastic properties of two coals Rimmer, Susan M. Origin of an underclay as revealed by vertical variations in mineralogy and chemistry

Horton Creek Formation Cluff, Robert M. The New Albany Shale Group of Illinois

Houchin Creek Coal Member (IVa)

Eggert, D. L. The Galatia Channel, a Pennsylvanian channel complex in western Gibson County, Indiana

Huron-Erie Lobe

Johnson, W. Hilton.

Variability in the nature
and types of glacial
sedimentation within the
Woodfordian Substage in
Illinois

Joachim Dolomite
Okhravi, Rasool. Carbonate
microfacies and depositional
environments of the Joachim
Dolomite (Middle
Ordovician), Southeast
Missouri and southern
Illinois, U.S.A.

Joliet Dolomite
Buschbach, T. C. Geology and
deep tunnels in Chicago

Joppa Member
McKay, R. H. Trace fossils and
environments of deposition
of the Aux Vases Formation
and the Joppa Member of the
Ste. Genevieve Formation
(Middle Mississippian) in

southeastern Missouri and

southern Illinois

Kankakee Dolomite
Buschbach, T. C. Geology and
deep tunnels in Chicago

Kinderhookian Series
Lewis, Richard. Petrology and
mineralogy of the
monticellite alnoite
associated with the Omaha
oil field, Gallatin County,
Illinois

Knox Group
Stevenson, David L. The potential of the Knox Dolomite in the Illinois Basin for petroleum production

Lake Forest Member
Pranschke, Frank A.
Stratigraphy of Lake
Michigan Formation in Lake
Michigan's Southern Basin

Lake Michigan Formation
Pranschke, Frank A.
Stratigraphy of Lake
Michigan Formation in Lake
Michigan's Southern Basin

Lake Michigan Lobe
Johnson, W. Hilton.
Variability in the nature
and types of glacial
sedimentation within the
Woodfordian Substage in
Illinois

LaSalle Cyclothem
Hickey, David R. Ecophenotypic
variability in some Upper
Pennsylvanian Myalindae
Nolde, Jack E. Facies and the
environments of deposition
of the LaSalle Cyclothem in
North-Central Illinois

Levias Member
Norby, R. D. The Mississippian
Valmeyeran-Chesterian series
boundary

Lingle Formation
Linsley, Robert M. A Detroit
River (Middle Devonian)
fauna from the subsurface of
Illnois

Linton Formation
Coveney, Raymond M., Jr.
Molybdenum and other heavy
metals of the Mecca Quarry
and Logan Quarry shales

Lisman Formation
Pigg, Kathleen B. Chaloneria

gen. nov.; heterosporous lycophytes from the Pennsylvanian of North America

Stidd, Benton M. The
vegetative anatomy of
Schopfiastrum oecussatum
from the Middle
Pennsylvanian of the
Illinois Basin

Liston Creek Limestone
Shaver, Robert H. Reef and
interreef water depths on
the Silurian Wabash Platform
of northern Indiana

Logan Quarry Shale
Coveney, Raymond M., Jr.
Molybdenum and other heavy
metals of the Mecca Quarry
and Logan Quarry shales

/ Louisiana Shale Cluff, Robert M. The New Albany Shale Group of Illinois

Mahomet Sand Aquifer
Kempton, John P. Hydrogeologic
evaluation of sand and
gravel aquifers for
municipal groundwater
supplies in East-central
Illinois

Maquoketa Formation
Buschbach, T. C. Geology and
deep tunnels in Chicago
Gilkeson, Robert H. Isotopic
and geologic studies to
identify the sources of
sulfate in groundwater
containing high barium
concentrations

Naymik, ThomasiG. Modeling as a tool in monitoring well network design

Perry, Eugene C., Jr. H, O, and S isotopic study of the groundwater in the Cambrian-Ordovician aquifer system of northern Illinois

Visocky, Adrian P. Impact of Lake Michigan allocations on the Cambrian-Ordovician aquifer system

Votaw, Robert B. Preliminary lithostratigraphy and biostratigraphy of the Maquoketa Group (Upper Ordovician), northern Illinois

Marseilles moraine
Moore, David W. Stratigraphy
of Woodfordian till and lake
beds in Iroquois and

SURVEY LIBRARY

neighboring counties, Illinois

Mattoon Formation
Bandy, William F., Jr.
Paleontology and
stratigraphy of the Mattoon
Formation (Pennsylvanian),
Coles County, Illinois

Bandy, William F., Jr.
Paleontology and
stratigraphy of the Mattoon
Formation (Pennsylvanian),
Coles County, Illinois

Stidd, Benton M. Callandrium callistophytoides, gen. et sp. nov., the probable pollen-bearing organ of the seed fern, Callistophyton

Taylor, Thomas N. Lasiostrobus gen. n., a staminate strobilus of gymnospermous affinity from the Pennsylvanian of North America

Taylor, Thomas N. Halletheca reticulatus gen. et sp. n.; a synangiate Pennsylvanian pteridosperm pollen organ

McClosky Limestone
Caserotti, Phillip M. Geology
and geophysics of Spring
Garden area, Jefferson
County, Illinois

McLeansboro Group
Bandy, William F., Jr.
Paleontology and
stratigraphy of the Mattoon
Formation (Pennsylvanian),
Coles County, Illinois
Bandy, William F., Jr.

Paleontology and stratigraphy of the Mattoon Formation (Pennsylvanian), Coles County, Illinois Phillips, Tom L. Pennsylvanian

coal swamp floras in the Illinois Basin

McNairy Formation Gustavson, John B. Dyersburg Quadrangle, Illinois, Kentucky, Missouri, and Tennessee

Matten, Lawrence C. Upper Cretaceous of Illinois; a preliminary survey

Mecca Quarry Shale
Coveney, Raymond M., Jr.
Molybdenum and other heavy
metals of the Mecca Quarry
and Logan Quarry shales

Mifflin Formation
Kuhnhenn, Gary Lee. Carbonate
microfacies of the
Platteville Group (Middle



Drdovician), Lee and Lasalle counties, Illinois

Mississinewa Shale Member Shaver, Robert H. Reef and interreef water depths on the Silurian Wabash Platform of northern Indiana

Morton Silt

Nelson, Robert S. Woodfordian subcrop and intensity of glacial erosion in McLean County, Illinois

Murphysboro Coal Member
Jacobson, Russell J.
Murphysboro coal, Jackson
and Perry counties;
resources with low to medium
sulfur potential

Nachusa Formation
Kuhnhenn, Gary Lee. Carbonate
microfacies of the
Platteville Group (Middle
Drdovician), Lee and Lasalle
counties, Illinois

Neda Formation
Buschbach, T. C. Geology and deep tunnels in Chicago
Votaw, Robert B. Preliminary
lithostratigraphy and
biostratigraphy of the
Maquoketa Group (Upper
Drdovician), northern
Illinois

New Albany Shale Cluff, Robert M.

Paleoenvironment of the New Albany Shale Group (Devonian-Mississippian) of Illinois

Cluff, Robert M. The New Albany Shale Group of Illinois

Cluff, Robert M. A preliminary assessment of the natural gas potential of the New Albany Shale Group in Illinois

Harvey, R. D. Petrology of New Albany Shale Group (Upper Devonian and Kinderhookian) in the Illinois Basin; a preliminary report

Paint Creek Formation
Strimple, H. L. The Chesteran
crinoid species
Agassizocrinus dissimilis
Weller

Paxton moraine

Moore, David W. Stratigraphy of Woodfordian till and lake beds in Iroquois and neighboring counties,

Illinois

Pecatonica Formation
Kuhnhenn, Gary Lee. Carbonate
microfacies of the
Platteville Group (Middle
Drdovician), Lee and Lasalle
counties, Illinois

Penokean Suite

Bickford, M. E. Interpretation of Proterozoic basement in the Midcontinent
Bickford, M. E. Drigin of middle Proterozoic granitic and rhyolitic rocks in the Midcontinent region of North America

Peoria Loess

Frest, T. J.
Woodfordian-Holocene mollusc
biogeography of Iowa and
Illinois

/ Petersburg Formation
Eggert, D. L. The Galatia
 Channel, a Pennsylvanian
 channel complex in western
 Gibson County, Indiana

Pittsburgh coal seam Ko, Hon-Yim. Elastic properties of two coals

Platteville Formation

Buschbach, T. C. Geology and deep tunnels in Chicago Kuhnhenn, Gary Lee. Carbonate microfacies of the Platteville Group (Middle Drdovician), Lee and Lasalle counties, Illinois

Visocky, Adrian P. Impact of Lake Michigan allocations on the Cambrian-Drdovician aquifer system

Plattin Subgroup
Kuhnhenn, Gary Lee. Carbonate
microfacies of the
Platteville Group (Middle
Ordovician), Lee and Lasalle
counties, Illinois

Prairie du Chien Group
Buschbach, T. C. Geology and
deep tunnels in Chicago
Visocky, Adrian P. Impact of
Lake Michigan allocations on
the Cambrian-Drdovician
aquifer system

Quimbys Mill Formation
Kuhnhenn, Gary Lee. Carbonate
microfacies of the
Platteville Group (Middle
Drdovician), Lee and Lasalle
counties, Illinois

Racine Dolomite

Buschbach, T. C. Geology and deep tunnels in Chicago

Garney, Ronald T. Fauna of the Racine Dolomite (Niagaran), Grafton, Illinois

Radnor Till

Kirchner, James G. Statistical confirmation of the field discrimination of till units with particular reference to a local Radnor section in Woodford County, Illinois

Rapid Member

Winkle, Candace J. The paleoenvironment of the Cedar Valley Limestone (Middle Devonian) in northwestern Illinois

Renault Limestone
Norby, R. D. The Mississippian
Valmeyeran-Chesterian series
boundary

Ridenhower Sandstone
Seyler, Beverly. Tidal
deposition of Cypress,
Ridenhower, and Bethel
sandstones (Chesterian, Late
Mississippian), La Salle
anticlinal belt, Lawrence
and Crawford counties,
Illinois

Robein Silt
Nelson, Robert S. Woodfordian
subcrop and intensity of
glacial erosion in McLean
County, Illinois

Robinson Sandstone
Davis, John A. An overview of micellar flooding
Harris, D. G. Synergism in reservoir management; the geologic perspective

Roger's City Formation

Koch, William F., II.

Brachiopod paleoecology,
paleobiogeography, and
biostratigraphy in the upper
Middle Devonian of eastern

North America; an ecofacies
model for the Appalachian,
Michigan, and Illinois
basins

Roxana Silt
Nelson, Robert S. Woodfordian
subcrop and intensity of
glacial erosion in McLean
County, Illinois

Saint Anne moraine
Moore, David W. Stratigraphy
of Woodfordian till and lake
beds in Iroquois and
neighboring counties,
Illinois

Saint Clair Formation
Garney, Ronald T. Fauna of the
Racine Dolomite (Niagaran),
Grafton, Illinois

Saint Louis Limestone
Norby, R. D. The Mississippian
Valmeyeran-Chesterian series
boundary

Saint Peter Sandstone
Visocky, Adrian P. Impact of
Lake Michigan allocations on
the Cambrian-Ordovician
aquifer system

Sainte Genevieve Limestone Caserotti, Phillip M. Geology and geophysics of Spring Garden area, Jefferson County, Illinois

McKay, R. H. Trace fossils and environments of deposition of the Aux Vases Formation and the Joppa Member of the Ste. Genevieve Formation (Middle Mississippian) in southeastern Missouri and southern Illinois

Norby, R. D. The Mississippian Valmeyeran-Chesterian series boundary

Salem Limestone

Cluff, Robert M. Depositional environments and diagenesis of Salem Limestone (Middle Mississippian) reservoirs in southern Illinois Jennings, J. R. A lycopod from

the Salem Limestone (Mississippian) of Illinois

Sangamon Soil
Nelson, Robert S. Woodfordian
subcrop and intensity of
glacial erosion in McLean
County, Illinois

Saverton Shale Cluff, Robert M. The New Albany Shale Group of Illinois

Scales Shale
Buschbach, T. C. Geology and
deep tunnels in Chicago
Votaw, Robert B. Preliminary
lithostratigraphy and
biostratigraphy of the
Maquoketa Group (Upper
Ordovician), northern
Illinois

Shetlerville Member
Norby, R. D. The Mississippian
Valmeyeran-Chesterian series
boundary

Snider Till Member
Moore, David W. Stratigraphy
of Woodfordian till and lake
beds in Iroquois and
neighboring counties,
Illinois

Solon Member

Winkle, Candace J. The paleoenvironment of the Cedar Valley Limestone (Middle Devonian) in northwestern Illinois

Spoon Formation
Jacobson, Russell J.
Murphysboro coal, Jackson
and Perry counties;
resources with low to medium
sulfur potential
Phillips, Tom L. Pennsylvanian
coal swamp floras in the
Illinois Basin

Springfield Coal Member (V) Eggert, D. L. The Galatia Channel, a Pennsylvanian channel complex in western Gibson County, Indiana

Staunton Formation Coveney, Raymond M., Jr.

Molybdenum and other heavy metals of the Mecca Quarry and Logan Quarry shales Pigg, Kathleen B. Chaloneria gen. nov.; heterosporous lycophytes from the Pennsylvanian of North America

Stidd, Benton M. The vegetative anatomy of Schopfiastrum decussatum from the Middle Pennsylvanian of the Illinois Basin

Sugar Run Dolomite
Buschbach, T. C. Geology and
deep tunnels in Chicago

Summum Coal Member
Baird, Gordon C. Pennsylvanian
coalfield rhizomorphs in
Illinois evidence for
non-compressive
coalification to bituminous
coal rank

Sweetland Creek Shale Cluff, Robert M. The New Albany Shale Group of Illinois Sylamore Shale Cluff, Robert M. The New Albany Shale Group of Illinois

Tar Springs Formation
Dyer, Rolla McIntyre.
Reservoir identification by
chromatographic methods

Trafalgar Formation

Moore, David W. Stratigraphy
of Woodfordian till and lake
beds in Iroquois and
neighboring counties,
Illinois

Traverse Group

Koch, William F., II.

Brachiopod paleoecology,
paleobiogeography, and
biostratigraphy in the upper
Middle Devonian of eastern
North America; an ecofacies
model for the Appalachian,
Michigan, and Illinois
basins

Tully Formation

Koch, William F., II.

Brachiopod paleoecology,
paleobiogeography, and
biostratigraphy in the upper
Middle Devonian of eastern
North America; an ecofacies
model for the Appalachian,
Michigan, and Illinois
basins

Union Springs Formation
Koch, William F., II.
Brachiopod paleoecology,
paleobiogeography, and
biostratigraphy in the upper
Middle Devonian of eastern
North America; an ecofacies
model for the Appalachian,
Michigan, and Illinois
basins

Valmeyeran Series
Lewis, Richard. Petrology and
mineralogy of the
monticellite alnoite
associated with the Omaha
oil field, Gallatin County,
Illinois

Wabash Formation
Heinrich, Paul V.
Sedimentology and
Woodfordian history of Lake
Saline, southern Illinois
Shaver, Robert H. Reef and
interreef water depths on
the Silurian Wabash Platform
of northern Indiana

Wayside Sandstone Member
Jennings, James R.
Macropaleontology of the
uppermost Mississippian and
basal Pennsylvanian strata
in the southern part of the
Illinois Basin
Merrill, Glen K. Conodonts
from the Middle
Carboniferous of southern
Illinois and the base of the
Pennsylvanian System

Wedron Formation

Kempton, John P. Hydrogeologic evaluation of sand and gravel aquifers for municipal groundwater supplies in East-central Illinois

Moore, David W. Stratigraphy of Woodfordian till and lake beds in Iroquois and neighboring counties, Illinois

Nelson, Robert S. Woodfordian

subcrop and intensity of glacial erosion in McLean County, Illinois

Weiler Sandstone
Harris, D. G. The role of
geology in reservoir
simulation studies

Westerly Granite
Moore, D. E. Strengths of clay
and non-clay fault gouges at
elevated temperatures and
pressures

Wilhelmi Formation Buschbach, T. C. Geology and deep tunnels in Chicago

Wise Lake Formation Buschbach, T. C. Geology and deep tunnels in Chicago

Y till

Moore, David W. Stratigraphy of Woodfordian till and lake beds in Iroquois and neighboring counties, Illinois

Yorkville Till Member
Moore, David W. Stratigraphy
of Woodfordian till and lake
beds in Iroquois and
neighboring counties,
Illinois

Rock-Unit Index 57



